Abstract

In this research paper, the study for grip force on the maximum level of the various materials handling griper can be evaluate at an effective maximum isometric strength especially for intermediate and proximal phalanges of index finger. This analysis method using the piezoresistive force sensor, whereas the devices will be automatically increases the accuracy and repeatability of the force sensitivity. Force sensor is a component of flexible and easily applied to enable measurement of the non-intrusive value. The sensor can be attached to or placed on a variety of surface conditions. The physical structure of product is to be combined with plastic film or metal for increased stiffness or for added protection from abrasion. In order to determine forces acting upon an articular joint during fingers rehabilitation for maximum grip force on low cost DataGlove. The estimation show that all the action force is starting at their fingertips functioning as the total volume of gripper force, dimensions / orientation of the handle, and grip made. By measuring the gripper forces acting on the fingertips of several subjects, the different handle and level of gripper force are resulting from movement of fingers will be gathered and will be analyzed so that a realistic mathematical model structure could be produced.
References

- L. Paredes-Madrid, P. Torruella, P. Solaeche, I. Galiana and P. Gonzalez de Santos,
  - Information on http://www.sciencedaily.com/articles/m/mathematical_model.htm
  - Information on http://www.tekscan.com/flexible-force-sensors
- Matei Ciocarlie, Andrew Miller and Peter Allen. Grasp Analysis Using Deformable Fingers. National Science Foundation under Grant No. IIS-03-12693
- Dennis A. Nowak and Joachim Hermsdörfer, 2003. Selective deficits of grip force control during object manipulation in patients with reduced sensibility of the grasping digits; Neuroscience Research 47 (65-72)

Index Terms

Computer Science
Intelligent Systems
Keywords
Dataglove  Fingers Force  Mathematical Model Structure  Piezoresitve Sensor  And  Rehabilitation