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Assessed Writing Task 2 – Problem-solution Text

In this assignment I want to focus on the following points:

1. Develop the ideas in more depth
2. Avoid making verb tense mistakes

Accidents and diseases are some of the main factors that cause people to loose members’ movement, partially or totally [1]. People who have those restrictions of movement experience a limitation in the ability to perform some daily activities, for example driving, walking and working [1]. To help minimizing such problems, artificial muscles rise as a prominent support solution that can have many benefits [2-3]. Artificial muscles are human-made materials that simulate actual muscles and can be in motion given certain external stimulations [3]. They can be produced in many ways, and here a naïve method is described [2].

This naïve method is used to produce artificial members in a series of six steps [4]. The initial stage is to cook the Orlon by boiling it, causing it to turn into a liquid rubbery substance. Orlon is a form of artificial silk that decomposes over time [5]. After the Orlon becomes a liquid rubbery substance, this solution should be poured onto Plexiglass, a transparent thermoplastic lightweight and shatter-resistance used to substitute glass [6], to form a thin film. Then, the excess water is removed from the film by applying any vacuum process. Next, the film is left to dry. When the film is dried, it is cut into 2 centimeter-wide strips and these strips are baked in an oven with a temperature of about 90 degree centigrade. Surprisingly, this prepared Orlon has a structure similar to that of human muscle fibre and it is naturally negatively charged with electricity. That is, if acid is applied to the material, it introduces positive charges that cause ions to attract which makes the material to contract, like muscles contracts. The idea is similar when a base is applied, although here the material expands, since the base introduces a negative charge.

It is not clear, however, whether such material provides a valuable solution for helping people who lost any movement to any degree. It is an appealing alternative as a way to provide support to users at reasonable prices. However, artificial muscles created by Orlon have some shortcomings such as foreign body rejection, rigidity and fragmentation. If more studies are performed to further improve its general quality, causing a decrease on the effects of those shortcomings, it might became a more robust solution since this could facilitate the users’ acceptance of the described method.