

Student and Teacher Question and Answers

Kwadropus—Mobility Arm

My team has decided to pursue the mobility arm on the robotic space duster project. One of the recommendations/qualifications for the design stated is to use "as few rigid parts as reasonable." We had planned to construct and connect multiple Stewart platforms together for the arm mechanics. If we are able to wrap the Stewart platforms in a soft material like silicone or latex, would we meet that requirement?

The exterior material definitely needs to be some kind of soft material so it isn't scratching up surfaces. A Stewart platform is an interesting direction I hadn't considered. I'm not sure you would get much curl like an octopus arm but you would get a lot of movement for the tip. Are you thinking hydraulic, pneumatic or electric actuators?