



Team 18F02 Kinetic A

Analytical Task #2

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“Scissor Lift Analysis”

2018-2019

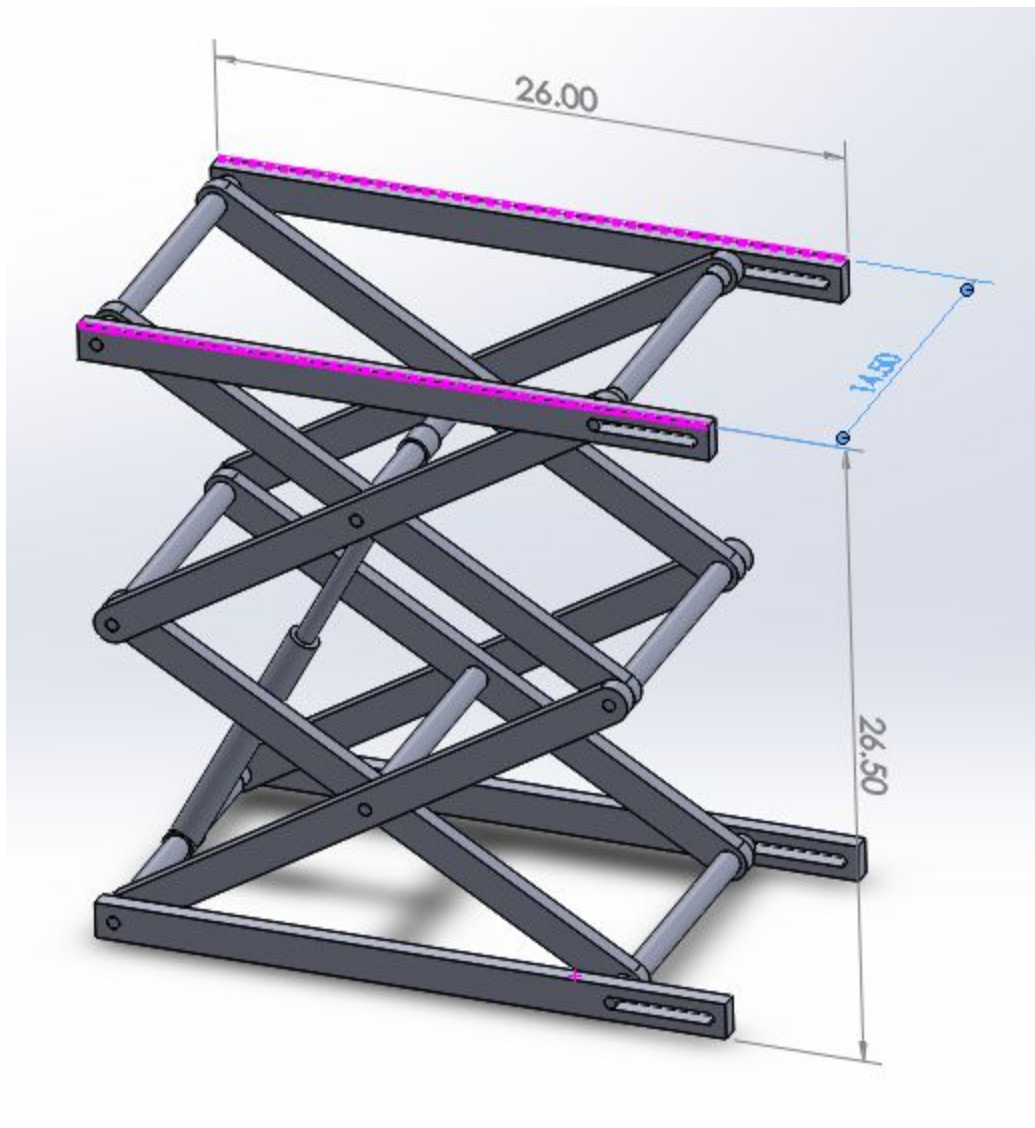


Project Sponsor/Faculty Advisor/Sponsor Mentor/Instructor: Sarah Oman

Introduction

The team has decided to attach our kinetic sculpture onto a scissor lift as to make transporting and displaying the kinetic sculpture with more ease, because of this additional system the team would like to know what the potential forces and stresses that the scissor lift may possess which will help determine the type of material selected and how strong of a hydraulic press the team would need to acquire.

Model



Calculations

In order to determine the stresses with the scissor lift itself, one must know how much the scissor lift will be lifting. The current expected weight of the kinetic sculpture is about 100 pounds, so it will be assumed that this weight will be evenly distributed throughout the system. If this is the case we can look at one side of the scissor lift to perform a force balance to see the internal forces present.

