arCAD '14

(@EXODIA'14)

ONLINE ROUND: 27TH FEB 2014

Instructions

- Any accepted CAD software can be used.
- Participants are requested to include all features of their design in the PPT.
- Use of INTERNET while event is strictly prohibited.
- PLAGIARISM, in any way, is strictly prohibited.
- You have to send us a zip file containing **part files, assembly, short presentation and renderings**.
- Animations are optional and will fetch you some bonus points.
- Send your entries to **arcad@exodia.in**.
- **Last date of submission: 2nd March 2014**

Problem Statement

A scissor lift is a type of platform that can usually only move vertically. The mechanism to achieve this is the use of linked, folding supports in a criss-cross "X" pattern, known as a pantograph (or scissor mechanism). The upward motion is achieved by the application of pressure to the outside of the lowest set of supports, elongating the crossing pattern, and propelling the work platform vertically. The platform may also have an extending "bridge" to allow closer access to the work area, because of the inherent limits of vertical-only movement.

The task now is to design a **Scissor Lift.**

1. The challenge is make design keeping in mind its form and function, aesthetics and ergonomics with no compromise on its user friendliness.
2. You can model the design to have different mechanisms on it.

   For Example:

   - ➔ Hydraulic or pneumatic, for reducing the power required
   - ➔ Mechanical, via a leadscrew or rack and pinion system

   Note: You are encouraged to add innovative add-one on the design for different purposes.
3. You need to make only first tier of the lift. You may take essential assumptions. But mention it in your presentation.