Abstract

Pneumatics Trainers

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Simulation training has been a very affective methodology of instruction in teaching technical curriculum. University of Nebraska at Kearney is currently constructing an Industrial Distribution Simulation lab. The Fluid Power course work will be housed in the product training area in this laboratory. Currently we have 3 Vickers hydraulic trainers and 4 work stations where hydraulics repair is simulated.

One major component that is missing is the hands on simulation for pneumatics training. Although we have course work in pneumatics, we have no hands on training available. We as students felt it would be extremely valuable. The university currently has a zero purchasing budget for new equipment. This activity will allow us to have the new equipment. Under the advisement of Dr. Jim Toppen, we are planning to do our poster session on the research and construction of 2 Pneumatics trainers. These trainers will allow 4 groups of students the opportunity for hands on pneumatic training.

The trainers will include the following pieces of equipment:

1. Single and double acting cylinders
2. Rotary cylinders
3. Clamping devices
4. A variety of Control valves, (solenoid, lever action, spring action)
5. Manifolds
6. Power supply
7. PLC's
8. PLC software
9. Push button switches.
10. Other s as our research continues