MCT336L
100 Pts.

Quiz 2
10/28/02

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Name

1. The pressure control valve that we tore down was an RC**G**-…… What does the "G" indicate and what exactly does that mean in terms of its physical characteristics?

2. The pressure control valve that we tore down was designed to be used with what nominal bore pipe size?

3. What is the name that commonly refers to Vickers Pressure Control valves that can be configured to be a pressure relief valve, a sequence valve, a pressure reducer, etc?

4. What method was used in lab to increase the speed of extension of cylinder? How does it work? Sketch and explain.

5. What does the word "animation" refer to in the Automation Studio software? How exactly is an animation selected?

6. For the directional control valve that you researched, what is the maximum pressure rating? Take the product information page with this information, circle it and include it with the quiz when you turn it in.

7. If a 3-position directional control is currently installed in a system with an open center, and it is determined that a blocked center is preferred, what must be done? For example, purchase a new DCV, change the wiring, …… or what?

8. What exactly are the differences between Schedule 80 and Schedule 160 pipe?

9. What are some of the key advantages that steel tubing provides relative to pipe?

10. What is the designation for the type of threads that you put on your nipple in lab? What type of thread is it and how does it work?

11. An *inlet* line that should be limited to 4 ft/s is to supply a pump with 5.0 gpm. Specify an acceptable steel tubing. The *outlet* of the pump is 2400 psi. Explain your answer.

12. Schedule 40 pipe is to be used in a circuit where pressure is 14 gpm and pressure is 800 psi. Specify a pipe and comment on the acceptability of the pipe's safety factor. Is it safe or not?

13. Calculate the average velocity inside ¾" Schedule 40 pipe when it carries 12 gpm. Show all work.

14. A cylinder is hooked up to regenerate on the extension stroke. If the bore is 3.0 inches, what rod diameter would be used to get an exact 2:1 cylinder?