

Ethanolamines/Glycol Ethers In Plant Training (IPT)

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Section Test 9 Utilities

Objectives/Answers:

- 1. State how the level is maintained in CT-500.**
By means of a control loop and process water.
- 2. Explain how we temperature control the cooling tower water. (Explain how the variable speed drive system works.)**
The FN-500 and FN-500A fans have a variable frequency drive on the motor driver. If the temperature of the water increases the fan speed increases. If the temperature of the water decreases the fan speed decreases, providing less cooling. The "B" fan runs at a constant speed.
- 3. State the purpose of adding chlorine to the cooling tower water.**
To control algae growth.
- 4. State the normal operating pressure of our block air system.**
85 - 100 pounds per square inch gauge.
- 5. State what backup we have for the C-550's.**
We can take air from the division air header or we can hook up a portable compressor to the system upstream of the receiver drum.
- 6. State those things that affect how long the air dryers last.**
The amount of air flow through the dryers is the main factor affecting the drying life of the dryers. The more air we send to the division header or use in the block, the faster the dryers reach their saturation point.
- 7. State the normal operating temperature of the C-550's.**
190 - 210 degrees F.

8. **Stat those things that can shut down a C-550.**
A. Low oil pressure.
B. High discharge temperature.
C. High discharge pressure.
D. Low cooling water pressure.
9. **State what type oil is used in the C-550's.**
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10. **State why we have PSV's on our steam lines and what they are designed to protect.**
We have PSV's on our steam lines in the plant downstream of the block valves at the block limits. These PSV's are to protect the steam lines and equipment in the plant. These PSV's should release excess pressure in the lines thus preventing ruptured lines or equipment.
11. **State where we get our 30# steam from.**
The 30# steam is stepped down from the 235# steam header through a pressure control loop. We also make up to the 30# steam header from D-510.
12. **State where we use 30# steam in our plant.**
Building heat and hot water, all utility stations, E-526, vent stacks, R-201 and the filter cleaning pot.
13. **State which condensate headers the 475#, 235# and 30# steam headers trap into.**
A. 475# and 235# to the high pressure header.
B. 30# steam traps to the low pressure header.
14. **State what we do with high pressure condensate.**
It initially enters D-510, is level controlled through E-219 into D-511 and then level controlled to power.
15. **State wh**