

# CENTRIFUGAL CHILLER DIAGNOSTIC LOG SHEET

| COMPONENT   | DESIGN | DESIGN | ACTUAL |
|---|--------|--------|--------|
| <b><u>EVAPORATOR</u></b>                                  |        |        |        |
| 1. WATER PRESSURE DROP ACROSS CHILLER                     |        |        |        |
| 2. ENTERING CHILLED WATER TEMPERATURE                     |        |        |        |
| 3. LEAVING CHILLED WATER TEMPERATURE                      |        |        |        |
| 4. DELTA T (LINE 3 TEMP MINUS LINE 2 TEMP)                |        |        |        |
| 5. SUCTION PRESSURE                                       |        |        |        |
| 6. EVAP. SATURATION TEMPERATURE (LINE 5, SAT. TEMP.)      |        |        |        |
| 7. SUCTION TEMPERATURE                                    |        |        |        |
| 8. SUPERHEAT (LINE 7 MINUS LINE 6)                        |        |        |        |
| 9. APPROACH TEMPERATURE (LINE 3 MINUS LINE 6)             |        |        |        |
| 10. EVAPORATOR G.P.M.                                     |        |        |        |
| <b><u>CONDENSER</u></b>                                   |        |        |        |
| 11. WATER PRESSURE DROP ACROSS CONDENSER                  |        |        |        |
| 12. ENTERING CONDENSER WATER TEMPERATURE                  |        |        |        |
| 13. LEAVING CONDENSER WATER TEMPERATURE                   |        |        |        |
| 14. DELTA TEMPERATURE (LINE 13 TEMP MINUS LINE 12 TEMP)   |        |        |        |
| 15. COMPRESSOR DISCHARGE PRESSURE                         |        |        |        |
| 16. COMPRESSOR DISCHARGE TEMPERATURE                      |        |        |        |
| 17. COND. SATURATION TEMPERATURE (LINE 15, SAT. TEMP.)    |        |        |        |
| 18. APPROACH TEMPERATURE (LINE 17 MINUS LINE 13)          |        |        |        |
| 19. DISCHARGE SUPERHEAT (LINE 16 TEMP MINUS LINE 17 TEMP) |        |        |        |
| 20. LIQUID LINE TEMPERATURE                               |        |        |        |
| 21. SUBCOOLING (LINE 17 TEMP MINUS LINE 20 TEMP)          |        |        |        |
| 22. CONDENSER G.P.M.                                      |        |        |        |
| <b><u>COMPRESSOR</u></b>                                  |        |        |        |
| 23. COMPRESSOR MOTOR CURRENT                              |        |        |        |
| 24. NET OIL PRESSURE                                      |        |        |        |
| 25. OIL TEMPERATURE ENTERING OIL COOLER                   |        |        |        |
| 26. OIL TEMPERATURE LEAVING COOLER                        |        |        |        |
| 27. OUTDOOR DRY BULB AIR TEMPERATURE                      |        |        |        |
| 28. OUTDOOR WET BULB AIR TEMPERATURE                      |        |        |        |
| 29. INLET GUIDE VANE POSITION                             |        |        |        |

**NOTES:**

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## CENTRIFUGAL CHILLER DIAGNOSTIC LOG SHEET

- TO CONVERT FT H<sub>2</sub>O TO PSIG, MULTIPLY FT. X .434 OR ÷ BY 2.31
- TO CONVERT PSIG TO FT H<sub>2</sub>O, MULTIPLY PSIG. X 2.31 OR ÷ .434
- NEED TO ADD A NOTE FOR CALCULATING EVAP AND COND GPM USING THE DELTA T EQUATION
- ALSO NEED TO MAKE A NOTE FOR TEACHING HOW TO USE THE PRESSURE DROP AND A FLOW
- CURVE TO CHECK THE GPM. NEED TO COMPARE EVERYTHING TO THE SUBMITTAL.
- NEED TO SHOW SOME DESIGN INFO ON THE SECOND PAGE TO HELP THEM GO THROUGH IT.
- APPROACH VALUES HELP YOU DETERMINE IF GOOD HEAT TRANSFER IS TAKING PLACE