



## Equipment II Pump Operations



### Course Objectives

1. Identify typical auxiliary equipment associated with pumps.
2. Describe a pump curve and its use in the manufacturing industry.
3. Define pump curve operating point.
4. Describe the effect of a larger pump or larger motor on a pump curve.
5. Identify other data displayed on some pumps curves.
6. Describe common performance issues with pumps and their causes and indicators.



### Key Terms (Define the following)

strainer - \_\_\_\_\_  
\_\_\_\_\_

diffuser - \_\_\_\_\_  
\_\_\_\_\_

accumulator - \_\_\_\_\_  
\_\_\_\_\_

foot valve - \_\_\_\_\_  
\_\_\_\_\_

Net Positive Suction Head Required (NPSHR) - \_\_\_\_\_  
\_\_\_\_\_

Net Positive Suction Head Available (NPSHA) - \_\_\_\_\_  
\_\_\_\_\_

air infiltration (vapor lock) - \_\_\_\_\_



## Questions

1. List four methods for sealing a pump.
  - 1) \_\_\_\_\_
  - 2) \_\_\_\_\_
  - 3) \_\_\_\_\_
  - 4) \_\_\_\_\_
  
2. What is the proper action to take if a mechanical seal is leaking?  
\_\_\_\_\_  
\_\_\_\_\_
  
3. What is the purpose of a diffuser?  
\_\_\_\_\_  
\_\_\_\_\_
  
4. Accumulators reduce output pressure \_\_\_\_\_ that create vibration.
  
5. What is the general purpose of foot and check valves?  
\_\_\_\_\_  
\_\_\_\_\_
  
6. How are foot valves different from check valves?  
\_\_\_\_\_  
\_\_\_\_\_
  
7. List the indicators that a pump is cavitating.  
\_\_\_\_\_  
\_\_\_\_\_
  
8. How does cavitation affect pump equipment and pump performance?  
\_\_\_\_\_  
\_\_\_\_\_
  
9. What are the indicators of air infiltration or vapor lock in a pump?  
\_\_\_\_\_  
\_\_\_\_\_
  
10. What must be done when a pump is in vapor lock?  
\_\_\_\_\_