AGENDA

Day 1

- Achievable benefits of pump system assessment and optimization
- System curves, energy consumption and system controls
  - Exercise 1 – Developing the system curve
  - Exercise 2 – Calculating power consumption and control losses
- Pump curves, variable speed pumping, parallel & series pumping
- Pump design, NPSH, allowable and preferred operation
  - Exercise 3 – Pump specific speed & attainable efficiency
  - Exercise 4 – Driver input power & annual operating costs
  - Exercise 5 – NPSHA for open system
  - Exercise 6 – NPSHA for closed system
  - Exercise 7 – Suction specific speed
- Common Operating Problems
- Pump System Components
  - Valves, drivers, variable speed drives, mechanical seals, bearings
  - Exercise 8 – Driver input power and pump input power