**Pump Analysis: Energy Equation**

**Determination of pump head:**

The suction head is head available just before the pump read from pressure transducer (INSERT),

Discharge head is head at the exit from pump read from pressure transducer (INSERT),

We can predict EFS head for a given capacity and constant speed by noting that,

From equation [1], as the pump increases the pressure head [insert assumptions]

The power delivered to the water (water horse power) is given by

The power delivered by the motor to the shaft (breaking horse power) is given by

Efficiency

**Operating line (system curve):**

Analyze the system to determine the pump head required as a function of flow rate through the pump. This will form our system line