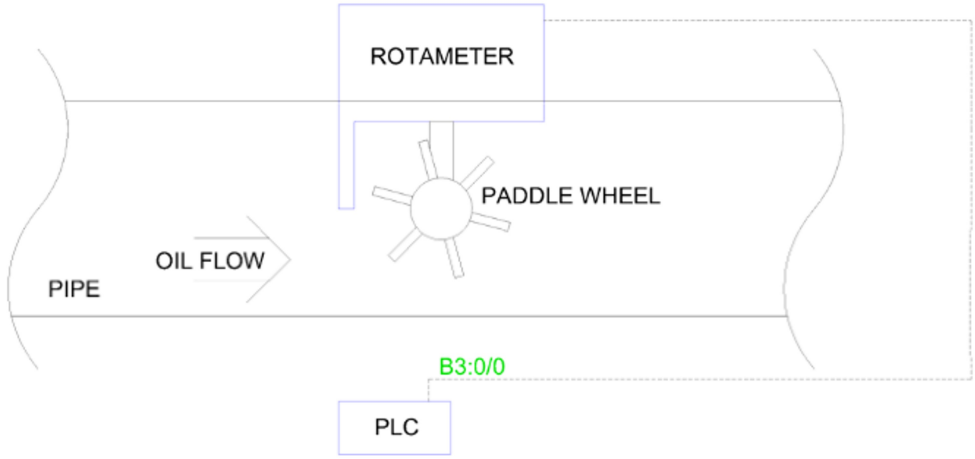
Project 5 Digital Rotameter

Saturday, 1 August 2020 3:04 PM

PROCESS:



The digital rotameter sends a single pulse for every 6.3 gallons of oil that flow past it. This 6.3 number is referred to as the rotameters "k-factor".

Put the rotameter on a bit-address instead of an input. This is so you can control the bit with a timer.

Create a timer routine that pulses the rotameter bit once every 12 seconds. How fast is the oil flowing?

Well...

1 pulse / second = 6.3 gallons / sec
1 pulse / 0.5 seconds = 3.15 gallons / sec

Do we want to couple the rate at which we take samples to the rotameter bit pulsing?
What if the rotameter bit pulse is what triggers the flow rate to be updated? But then what if the flow stops? It wouldn't be picked up.

What do we need?

- A timer that stores the time between the rotameter bit pulsing
- Update the flowrate once every idk 5 seconds? Or couple it to the rotameter bit pulsing
- If no pulse in less than 60 seconds - set flow rate to zero?