1. DIW Tank related P&ID notes:

Questions to answer:

The five places the water from this tank goes to:

1. Steamer ~50L
2. Cooler ~50L
3. Pretreatment Tank ~ 28L
4. Media Prep ~40L
5. Rice Husk prep ~40L

Estimated Capacity should be 200L

What material will the tank be made out of?

Plastic

Any electronics involved?

No

Valves & Joints:

We need to wait until the chiller/steamer and the discuss how these other related tanks going to be.

Positioning the water tank:

No height required as we are using a pump

Ideas:

Can we have one outlet and link all the points from that one outlet using pipes and separate valves

Can we get a smaller plastic pump to avoid rust, vs small SS pump with very small rating.

Check other smaller chiller from zaman uncle.

Also make a calculation of how much water is required.

Emdad will talk to talutia/manik about chiller making

And also he will talk about the incubation temperature control system, with manik

Also after the chiller and steam generator comes we will make the rest of the plan

For now we will design the bio reactor

Also I will have to make the P&ID and put in the information when we can.

30/11/2021

SOP and discussion

1. Cleaning
   1. Enter normal water with detergent (We need to select a port for this)
   2. Keep detergent water for 30 mins
   3. Release all valves and start high pressure washing with water
   4. Keep the main outlet of water open and rinse a few times.
2. Temp Control
   1. Design the P&ID and write the notes for this
3. Sterilization
   1. Sterilize in empty vessel
   2. Feed the substrate
   3. Sterilize the substrate
4. Innoculation
   1. Check out luer lock
5. Probe Sharing
   1. Oxygen needs to have a direct entry with heated sterilization.