

# Manual for operating the large flumetank in MT218

E.H.M.Ulijn

september 2015

## 1 Intro

This manual aims to guide you in the operation of the large flumetank during your MT4400 (Mechatronics) course and how to control the flow speed. If anything is unclear please contact me by phone (+31152781503) or email (e.h.m.ulijn@tudelft.nl).

## 2 Startup



Figure 1: Flumetank frontside



Figure 2: Flumetank backside

To get going in the large flumentank follow this recipe:

- Turn Red switch on electro switchboard (see Figure 3) to position ON (then it is in a vertical position as in Figure 3).

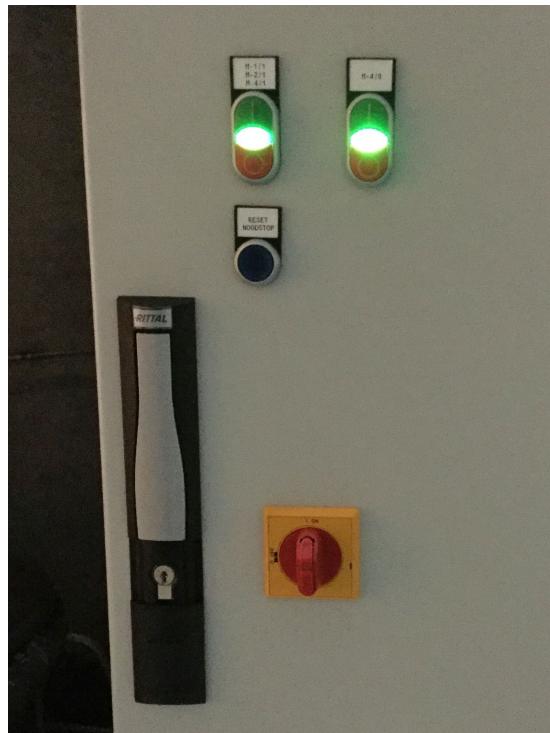


Figure 3: Electro switchboard

- If the blue button is lit just press it once and wait for it to turn off.
- Press the green button marked M-1/1, M-2/1, M-4/1 (positioned above the blue button) and wait until the fans have started.
- Wait for the Siemens controllers to boot up. This can take a few minutes so please be patient.
- Although all controller are switched on you only need to control the one labelled 'STROMING' (flow current in ductch). Don't operate any off the others as you will probably damage the flumentank and don't need them.
- Press Hand/Auto button to change the 'connected to computer' icon to an icon of a hand. **Wait for it.**
- Press the green powerbutton. You should hear a ventilator powering up. **Wait for it.**



Figure 4: Autocontrol



Figure 5: Manual control

- You should get a setpoint screen where you can control the setpoint using the dial. Change it slowly at a rate of 5% in 30 seconds to your desired position. **NEVER set it to anything > 15%**, because you will break stuff.
- Take care your boat doesn't get sucked in by the pump. A boat will coast a k€5 and damages to the tank will cost a multiple amount of this. What goes for the boat also goes for your partner, take care for each other and look after each others safety.

### 3 Closing up

After you finished your mt218 mechatronics session follow this recipe:

- Turn the dial counter clockwise down at a rate of 15 seconds for each percent you slow down.
- at 0% wait until the water has reached standstill and you cannot observe any movement anymore.
- Press the red powerbutton to switch off
- Wait till the fans in the siemens controller shuts off, you can clearly hear the noise shutting down.
- Turn the Red-power switch to horizontal mode which is the off position.
- Go home.

## **4 Law & Order**

If damages arise because of irresponsible behavior on your side; you will be removed from this course. The examination board will be informed and will punish you for your actions. Same goes for events where during random visits from me you seems to run at higer speeds than the 15% maximum.