Plant Operations Report & Reflection

Group # 10

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Summary

Total Cost at End of Shift (t = 1440) **146.5**

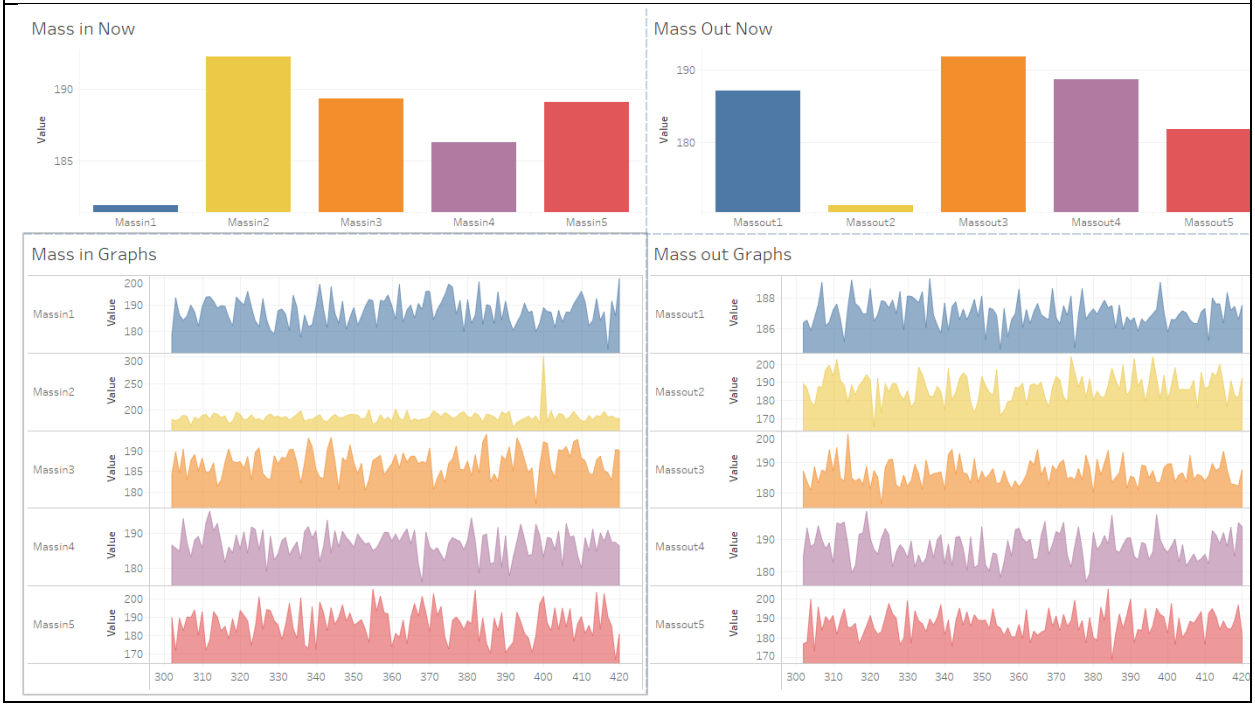
Most of the day looked normal. We had a few points where we checked pipes just to be safe. At T=930 we saw a concerning increase in our temperature graph, so we checked Out3 and had to spend the next timeslot repairing and cleaning up that pipe.

Reflection

Our frame of reference was good at highlighting changes in activity over time and captured lots of discrepancies with the data throughout the day. However, it may have been too sensitive to these changes, as we had several false alarms. We were able to notice and repair one leak at t=930. It was hard to see gradual changes without lots of adjustments to our window. The biggest drawback of our visualization was that we were unable to separate large changes that were part of regular activity from large changes that were abnormal.

Key Decision Points

t = 420

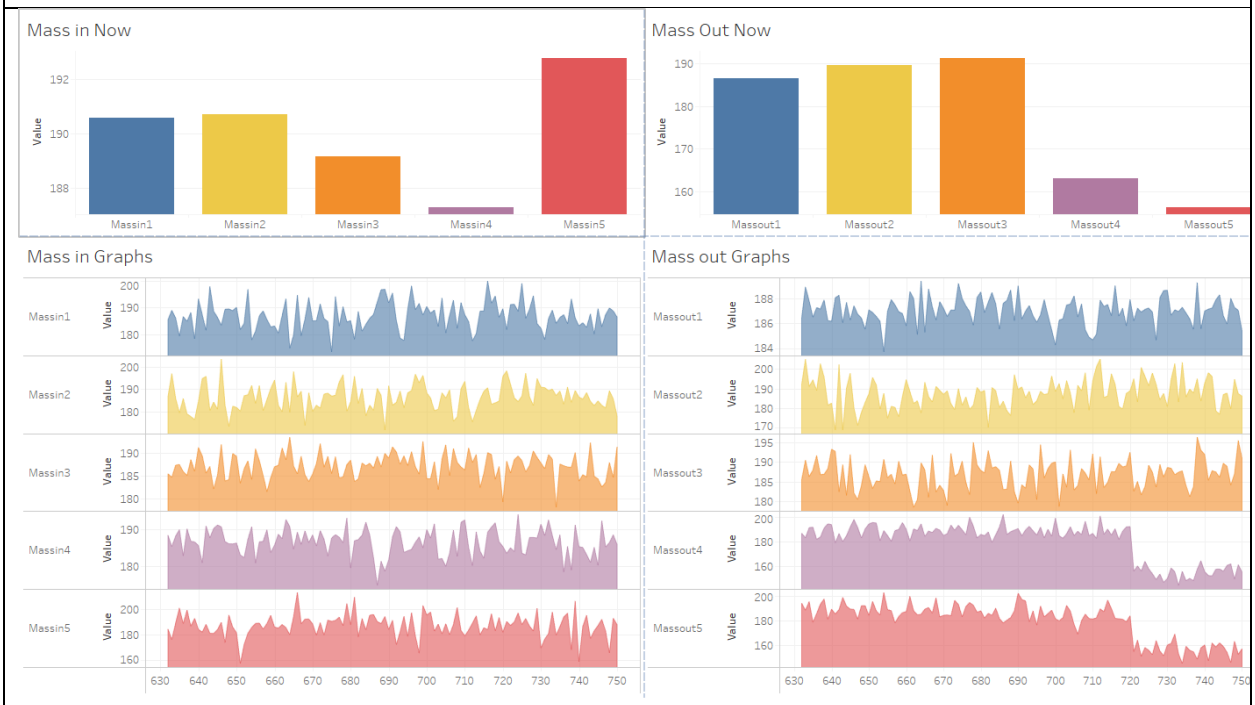


Interpretation: We saw large spikes in massin2 and pressout3

Decision: We switched to abnormal mode, because of the spike we saw in Massin2, and Pressin3. At the next time window we went back to normal mode.

Reflection: We were able to see the spike relative to the previous activity over time. We ended up seeing this multiple times throughout the simulation.

t = 750



Interpretation: We saw rapid and sustained decreases in Massin4 and Mass in 5

Decision: We decided to check the out5 pipe but found that nothing was wrong

Reflection: Again, our design made it easy to see the change over time. Our design made it hard to see whether we should check 4 or 5 at this moment.

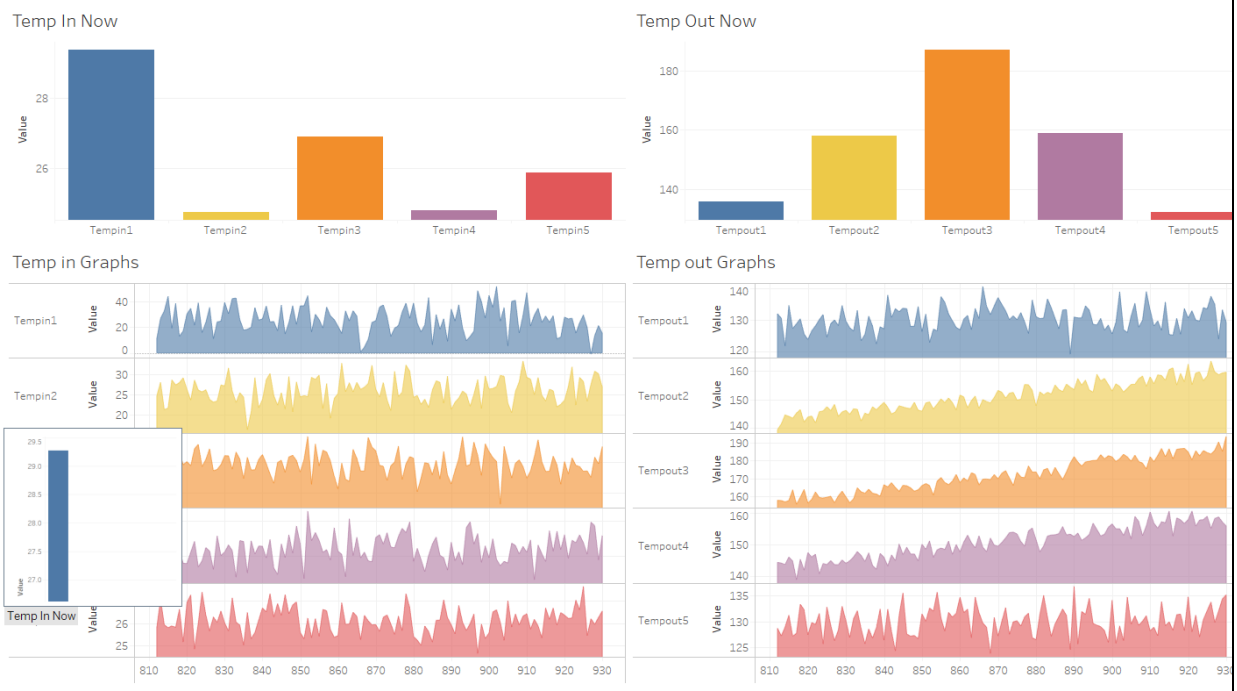
t = 810

Interpretation: We saw large spikes in massin2 and pressout3

Decision: We decided to check the in2 pipe

Reflection: Our design highlighted the contrast with these values compared to the rest of the activity. It made it very easy to see change from the baseline, but didn't tell us whether or not there was actually a problem.

t = 930



Interpretation: we saw steady increases in temperature that we thought must be an error in the pipe

Decision: We checked the out3 pipe and found that there was a leak that had to be cleaned and repaired in the following time slots.

Reflection: Our design made it easy to see the steady growth in the sensors, and in this case it was clearly abnormal compared to the previous activity.

t = 1350

Interpretation: we saw a sharp decrease in massin3 at a previous time, we thought there might be an issue.

Decision: We entered abnormal mode until 1410 to see if anything else would show up

Reflection: Our design made it easy to see the sharp change, but in this case, it was a false alarm, as this was just normal activity.

t = 1410

Interpretation: Like before, we saw sharp increases in massin2 and pressout3

Decision: We checked the in2 pipe to see if there was a problem with the pipe. The pipe was fine.

Reflection: Our design made it easy to see the sharp change, but in this case, it was a false alarm, as this was just normal activity.