



Politecnico
di Torino

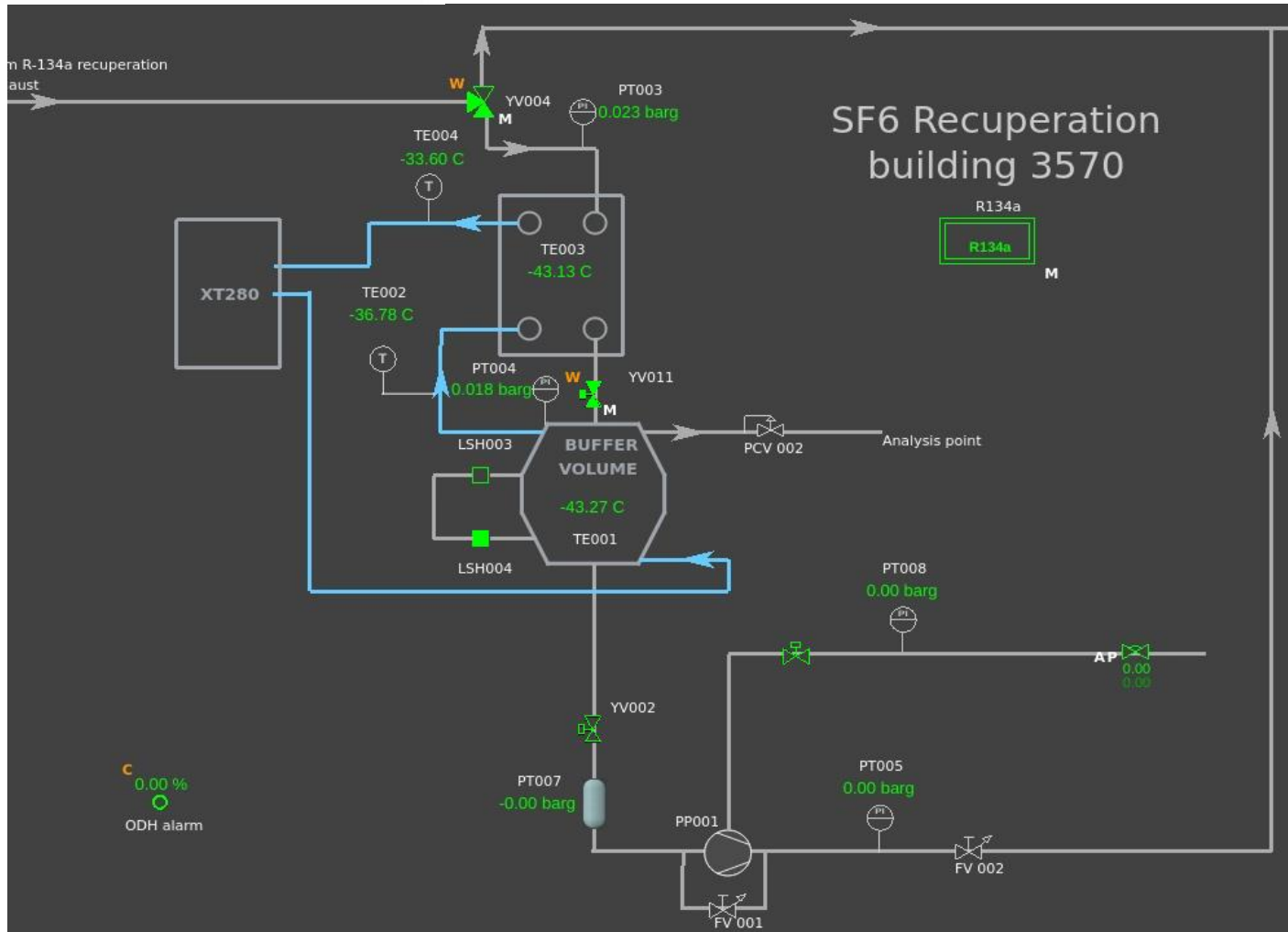


PRESENTATION WEEK 32

08/08/2024

PRESENTER:
Amin Bouzaiene

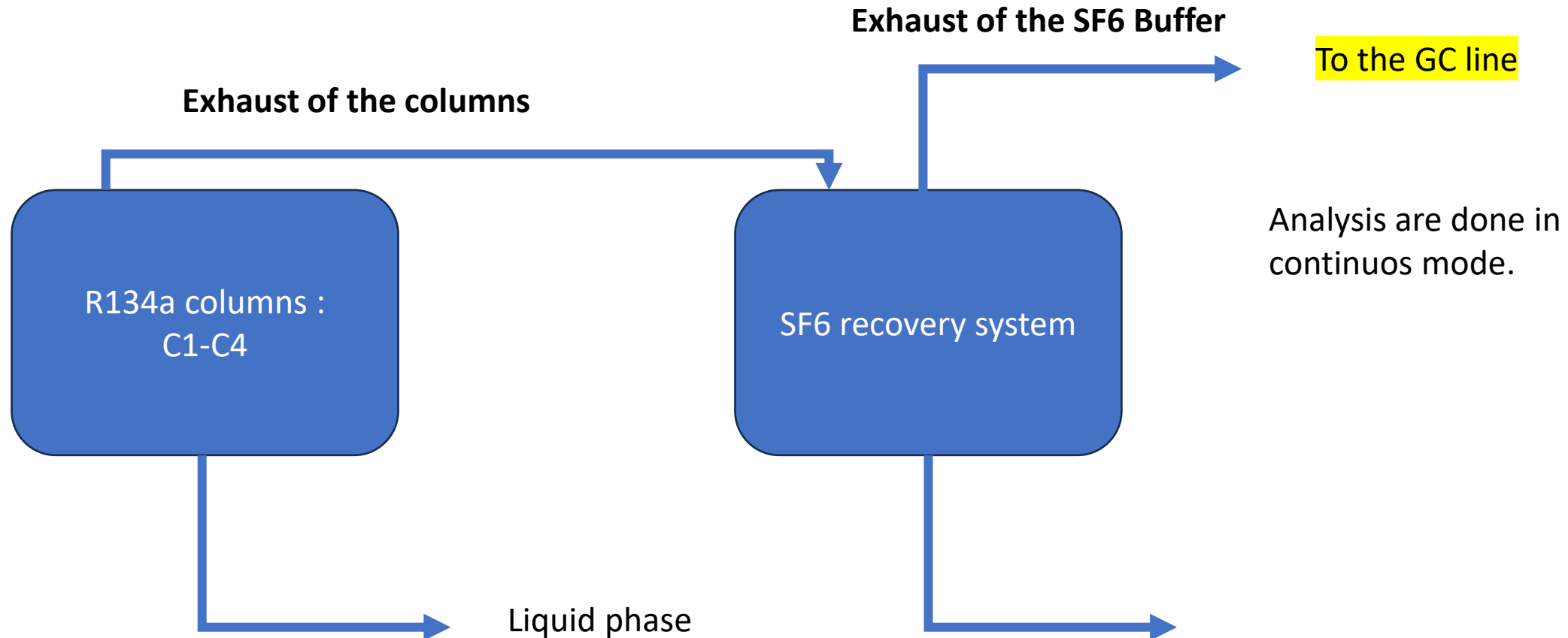
Potential issues:



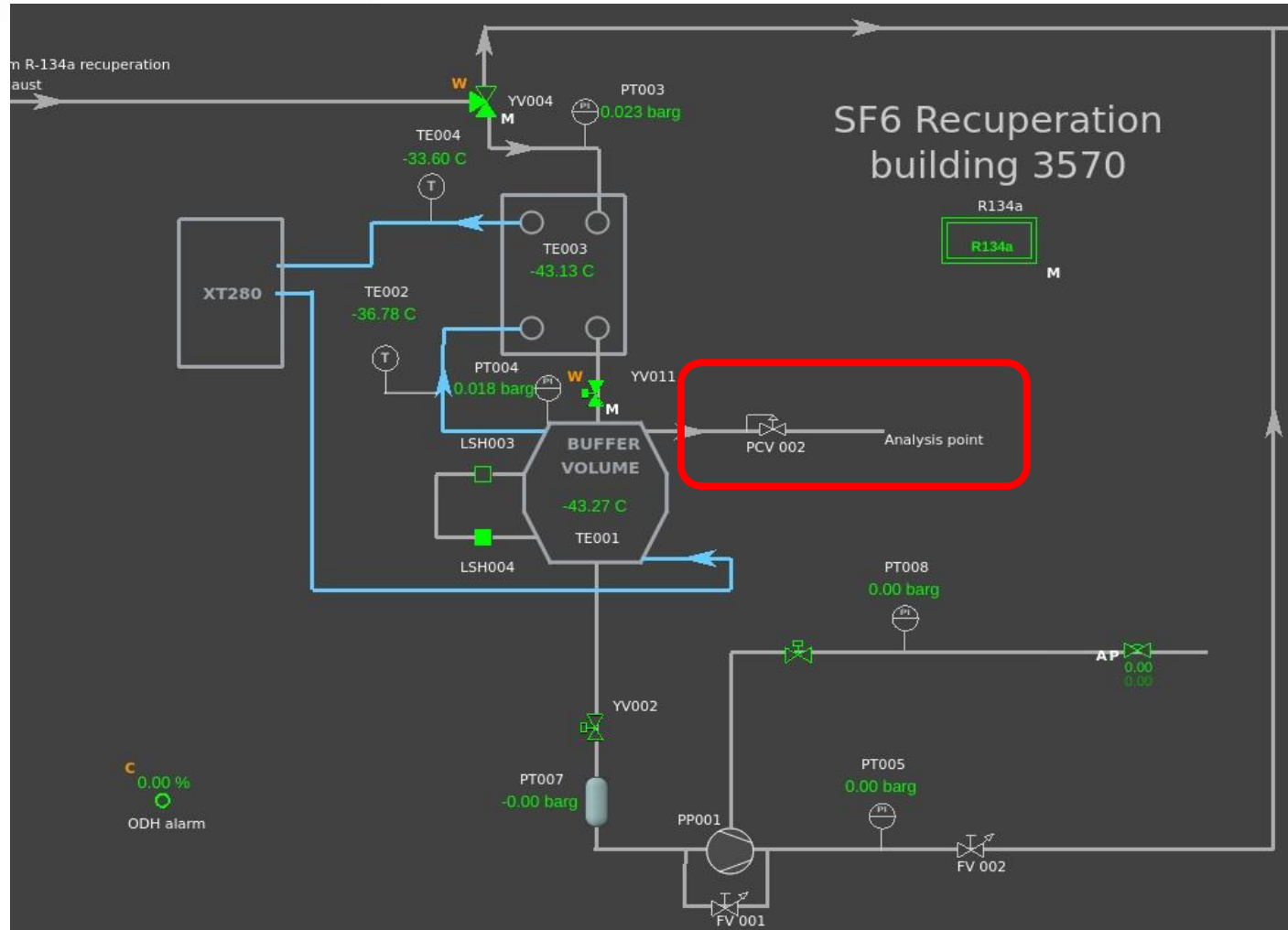
- We intake a lot of air in the system every time we start the analysis:
 - Checked with leak detector and tightened all the connectors that are in the GC line this means that air intake could be from the zimmerly -> **Need to check**



How the analysis of the SF6 recovery system are being done



Experimental results of Analysis:



FEEDING conditions:

T = 20 °C

P = 1 bar

Flowrate = 95 l/h

Buffer 1 condition:

Temperature: -45°C

Pressure: 1,03 bar

Initial composition :

SF6: 1,3%

R134A: 79,4%

ISOBUTANE: 19%

N2: 0,4%

Flowrate for each component:

SF6: 1.2 l/h

R134A: 76.24 l/h

ISOBUTANE: 3.6 l/h

N2: 0.8 l/h



Experimental results of Analysis while different columns of the R134a recovery system



-45C

	C1			C2			C3			C4		
Components	Area ratio %	Recovery efficiency	Outlet Volume (l)	Area ratio %	Recovery gas phase	Outlet Volume (l/h)	Area ratio %	Recovery gas phase	Outlet Volume (l/h)	Area ratio %	Recovery gas phase	Outlet Volume (l/h)
SF6	11%	62.5%	0.565	12%	57%	0.68	16%	79%	0.95	15%	79%	0.94
R134A	47%	3%	2.35	47%	3.5%	2.67	46%	4%	2.73	46%	4%	2.91
iC4H10	23%	32%	1.15	23%	36%	1.31	22%	36%	1.3	23%	40%	1.45
N2	18%	68%	0.885	17%	74%	0.97	15%	68%	0.89	15%	73%	0.95