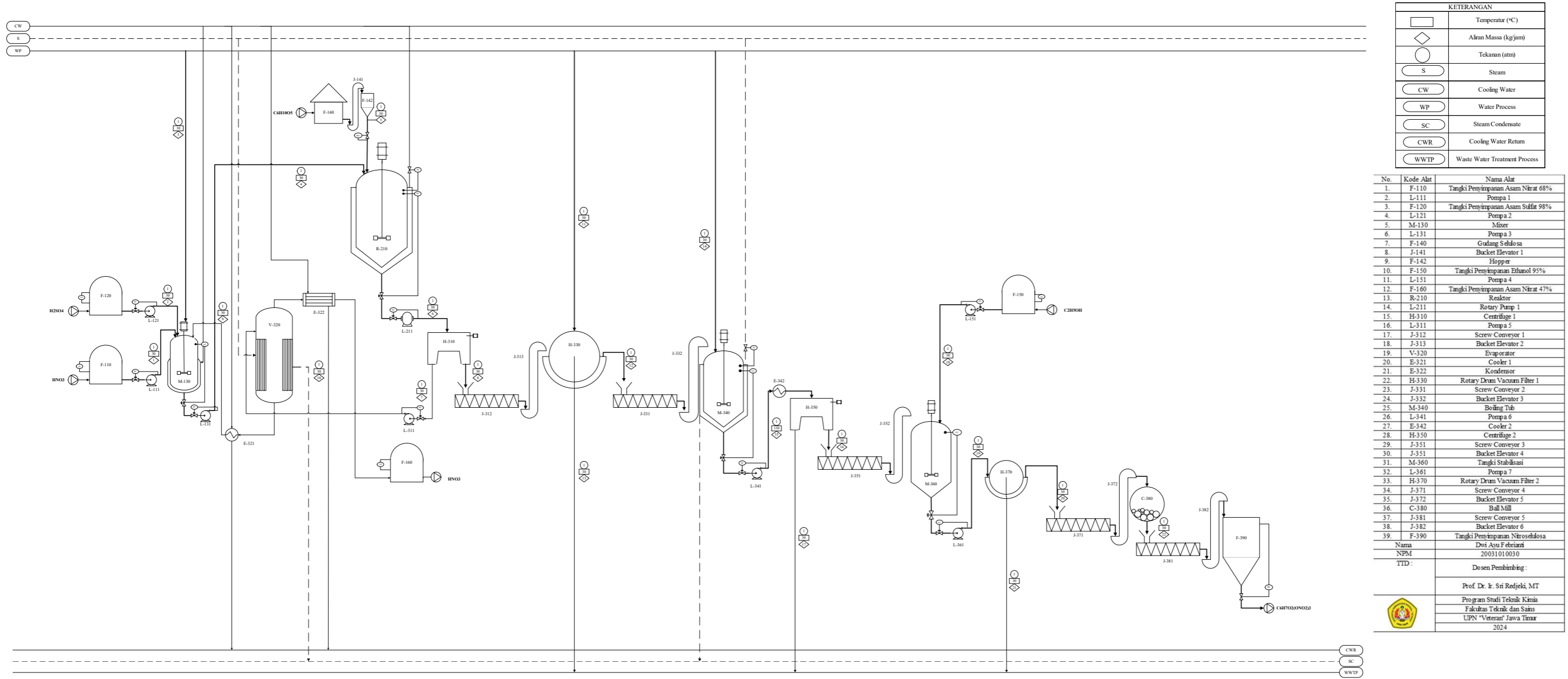


FLOWSHEET PRA RANCANGAN PABRIK NITROCELLULOSE DARI CELLULOSE DAN NITRIC ACID

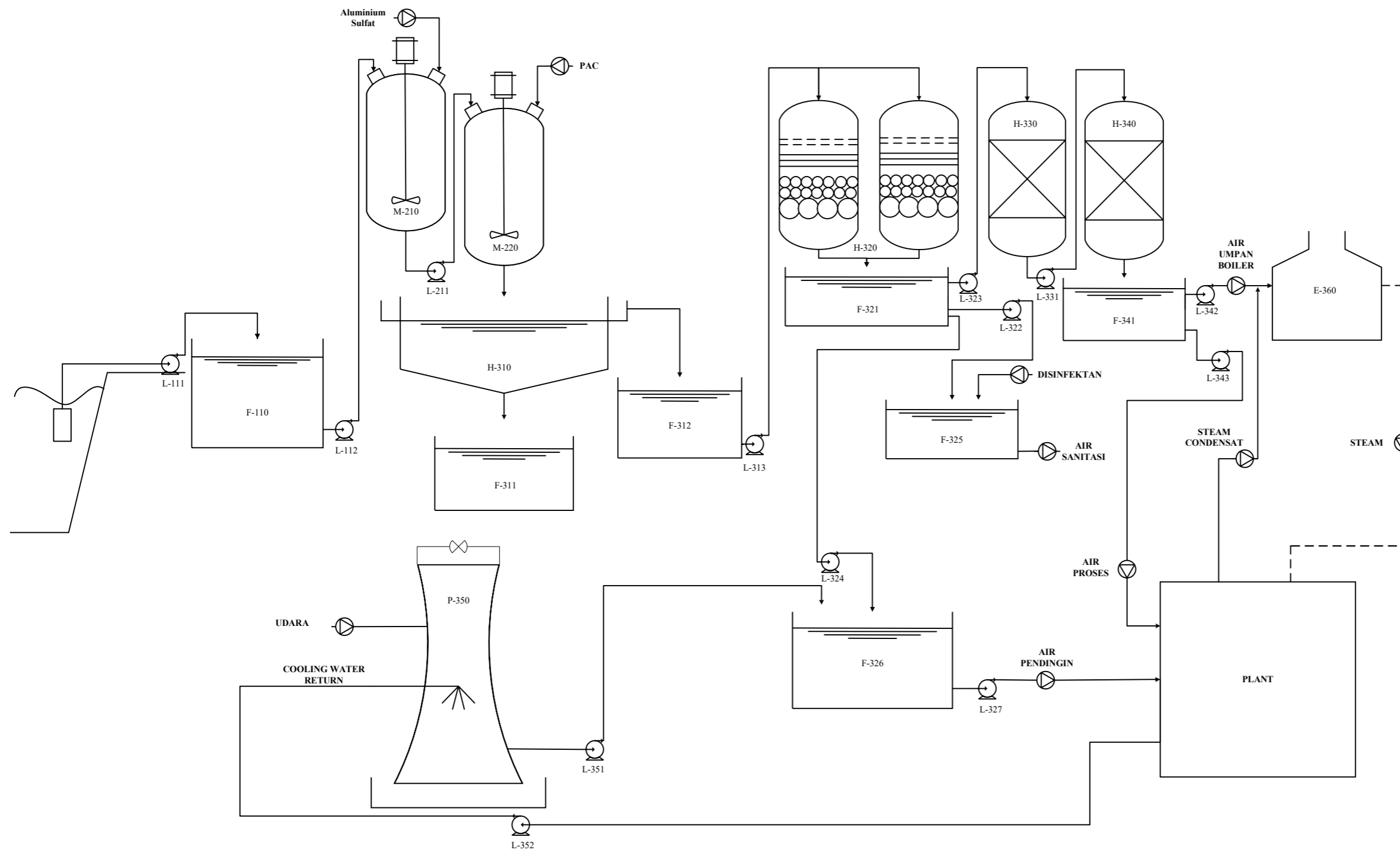


KETERANGAN	
	Temperatur (°C)
	Aliran Massa (kg/jam)
	Tekanan (atm)
	Steam
	Cooling Water
	Water Process
	Steam Condensate
	Cooling Water Return
	Waste Water Treatment Process

No.	Kode Alat	Nama Alat
1.	F-110	Tangki Penyimpanan Asam Nitrat 68%
2.	L-111	Pompa 1
3.	F-120	Tangki Penyimpanan Asam Sulfat 98%
4.	L-121	Pompa 2
5.	M-130	Mixer
6.	L-131	Pompa 3
7.	F-140	Gugang Sidirosa
8.	J-141	Bucket Elevator 1
9.	F-142	Hopper
10.	F-150	Tangki Penyimpanan Ethanol 95%
11.	L-151	Pompa 4
12.	F-160	Tangki Penyimpanan Asam Nitrat 47%
13.	R-210	Reaktor
14.	L-211	Rotary Pump 1
15.	H-310	Centrifuge 1
16.	L-311	Pompa 5
17.	J-312	Screw Conveyer 1
18.	J-313	Bucket Elevator 2
19.	V-320	Evaporator
20.	E-321	Cooler 1
21.	E-322	Kondensor
22.	H-330	Rotary Drum Vacuum Filter 1
23.	J-331	Screw Conveyer 2
24.	J-332	Bucket Elevator 3
25.	M-340	Boiling Tub
26.	L-341	Pompa 6
27.	E-342	Cooler 2
28.	H-350	Centrifuge 2
29.	J-351	Screw Conveyer 3
30.	J-351	Bucket Elevator 4
31.	M-360	Tangki Stabilitas
32.	L-361	Pompa 7
33.	H-370	Rotary Drum Vacuum Filter 2
34.	J-371	Screw Conveyer 4
35.	J-372	Bucket Elevator 5
36.	C-380	Ball Mill
37.	J-381	Screw Conveyer 5
38.	J-382	Bucket Elevator 6
39.	F-390	Tangki Penyimpanan Nitroselulosa
Nama		Dwi Ayu Febrina
NPM		20031010030
TTD :		Dosen Pembimbing :
		Prof. Dr. Ir. Sri Redjeki, MT
		Program Studi Teknik Kimia
		Fakultas Teknik dan Sains
		UPN "Veteran" Jawa Timur
		2024

Nomor Komponen	Aliran Massa (Kg/Jam)																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
C ₆ H ₁₀ O ₅					4034,3794	605,1569		605,1569				605,1569			605,1569	12,1031	593,0538		12,1031	12,1031		12,1031
SiO ₂					12,8688	12,8688		12,8688				12,8688			12,8688	0,2574	12,6115		0,2574	0,2574		0,2574
HNO ₃	14034,4166			14034,4166		10033,6570	9832,98384	200,6731		9832,9838		8,9066	841,5423		8,9066	0,1781	8,7284		0,1781	0,0064	0,1717	0,0064
H ₂ SO ₄		42077,1148		42077,1148		42077,1148	41235,5725	841,5423	41235,5725			10,6951	1611,2608								372,5532	
C ₂ H ₅ OH																		2559,6697	2559,6697			
H ₂ O	6604,4313	858,7166	3199,8725	10663,0204	242,36304	12048,4576	11807,4885	240,9692	841,5423	10965,9462	1380,98673	6286,9079	2644,5697	12573,81584	12584,5109	251,6902	12332,8207	134,7195	386,4097	13,8565	2559,6697	13,8565
C ₆ H ₇ O ₂ (ONO ₂) ₃						6286,9079		6286,9079				6924,5353			6286,9079	6286,9079			6286,9079	6286,9079		6286,9079
Total	20638,8479	42935,8315	3199,8725	66774,5518	4289,6113	71064,1631	62876,0448	8188,1183	42077,1148	20798,9300	1380,98673	13849,0706	5097,3728	12573,81584	19498,3511	6551,1368	12947,2144	2694,3891	9245,52589	6313,1313	2932,3946	6313,1313

FLWSHEET UTILITAS PRA RANCANGAN PABRIK NITROCELLULOSE DARI CELLULOSE DAN NITRIC ACID



No.	Kode Alat	Nama Alat
1.	F-110	Bak Penampung Air Sungai
2.	L-111	Pompa 1
3.	L-112	Pompa 2
4.	M-210	Tangki Koagulasi
5.	L-211	Pompa 3
6.	M-220	Tangki Flokulasi
7.	H-310	Clarifier
8.	F-311	Bak Penampung Air Flok
9.	F-312	Bak Penampung Air Bersih Dari Clarifier
10.	L-313	Pompa 4
11.	H-320	Sand Filter
12.	F-321	Bak Penampung Air Bersih
13.	L-322	Pompa 5
14.	L-323	Pompa 6
15.	L-324	Pompa 7
16.	F-325	Bak Penampung Air Sanitasi
17.	F-326	Bak Penampung Air Pendingin
18.	L-327	Pompa 8
19.	H-330	Tangki Kation Exchanger
20.	L-331	Pompa 9
21.	H-340	Tangki Anion Exchanger
22.	F-341	Bak Air Demineralisasi
23.	L-342	Pompa 10
24.	L-343	Pompa 11
25.	P-350	Cooling Tower
26.	L-351	Pompa 12
27.	L-352	Pompa 13
28.	E-360	Boiler
Nama		Dwi Ayu Febrianti
NPM		20031010030
TID :		Dosen Pembimbing :
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