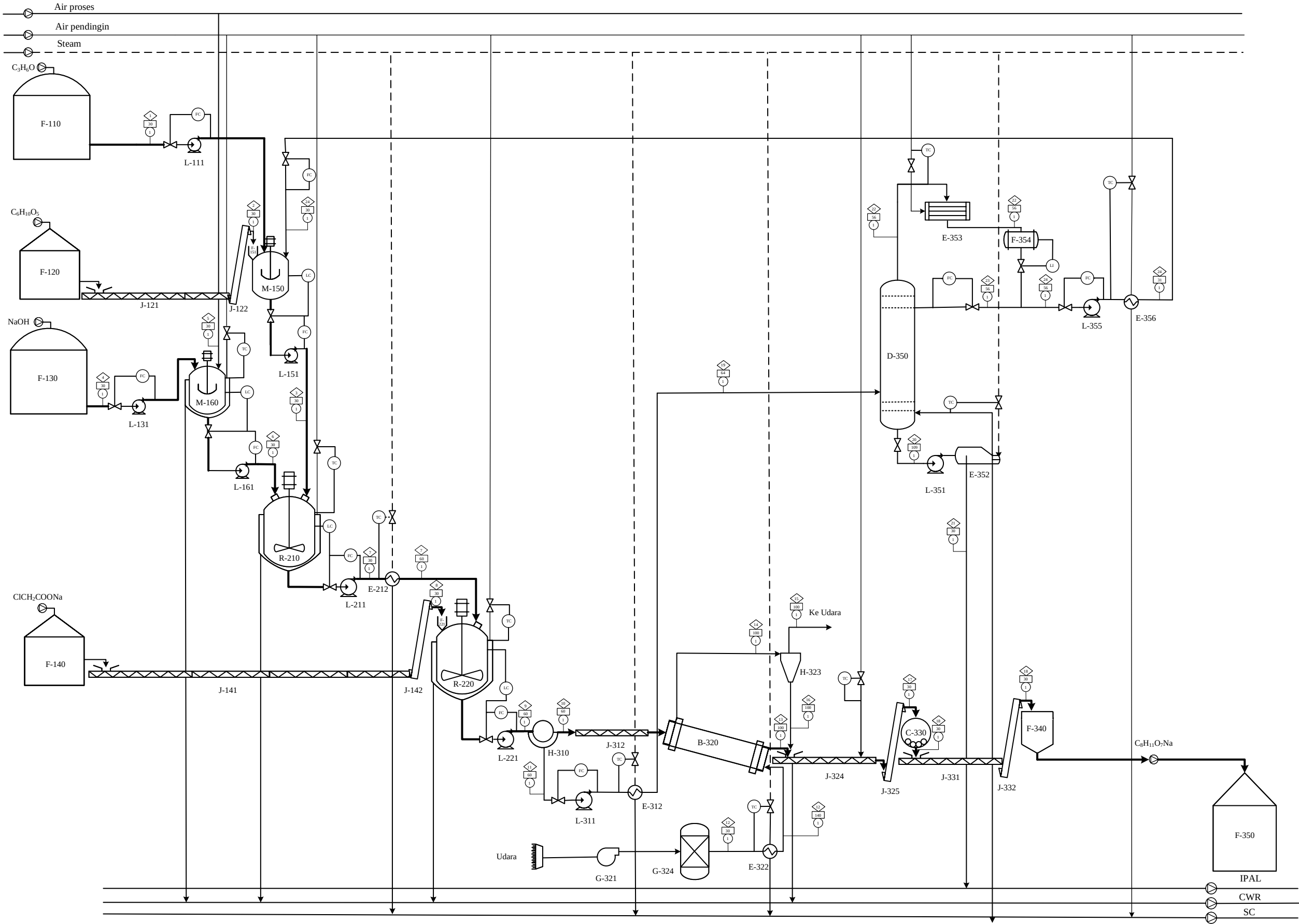


PRA RENCANA PABRIK CARBOXYMETHYL CELLULOSE (CMC) DENGAN METODE RUSSEL NELSON



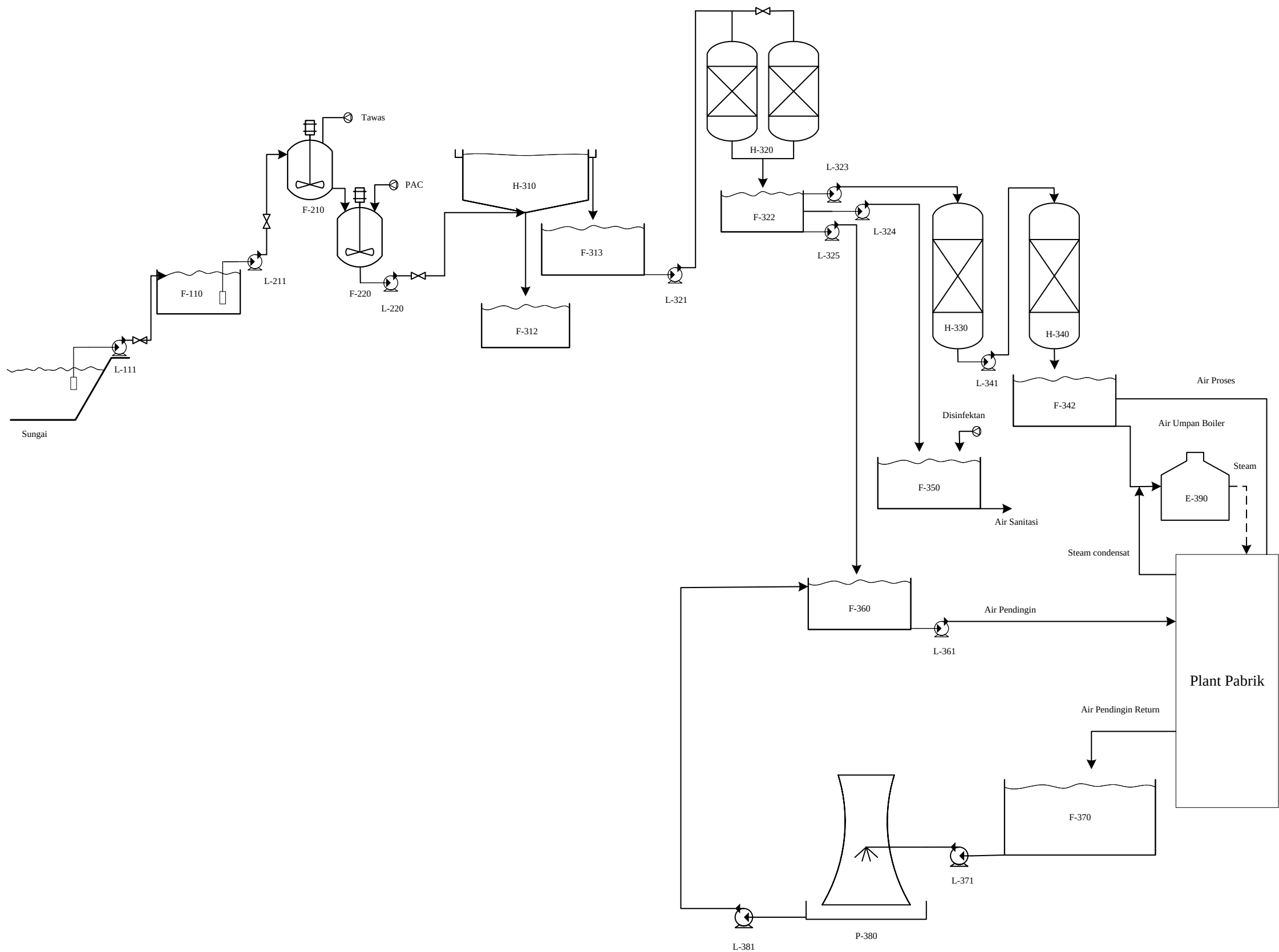
Komponen	Nomor Arus (Kg/jam)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C ₆ H ₁₀ O ₅		3654,0001	3654,0001				255,7800		255,7800	5,1156	250,6644		5,1156				5,1156	5,1156	250,6644	285,0927	74,9870			
NaOH				1460,3380		1460,3380	621,9958		590,3552	11,8071	578,5481		11,8071				11,8071	11,8071	578,5481	658,0106	173,0743			
C ₂ H ₆ O	21026,4348		21026,4348				21026,4348		21026,4348	420,5287	20605,9061		4,2053	416,3234	414,2195	2,1039	6,3092	6,3092	20605,9061	93,7444	24,6573	20523,4825	28174,8629	7607,5441
C ₆ H ₉ O ₅ Na							4051,2050		283,5844	5,6717	277,9127		5,6717				5,6717	5,6717	277,9127	316,4535	83,2357			
H ₂ O	84,1057	192,3158	276,4215	29,8028	4351,2113	4381,0141	5035,1088	48,2143	5035,1088	100,7022	4934,4066		49,7213	51,2309	50,9809	0,2500	49,7213	49,7213	4934,4066	5589,6899	437,8414	19,7376	8,4069	2,2700
ClCH ₂ COONa								2362,5024																
C ₆ H ₁₁ O ₂ Na							4947,1270		4947,1270				4896,7513	50,3756	0,5038	49,8719	4946,6232	4946,6232						
NaCl							1185,3077		23,7062	1161,6015			23,7062				23,7062	23,7062	1161,6015	1321,1454	347,4965			
C ₂ H ₃ O ₂ Na							77,5433		1,5509	75,9925			1,5509				1,5509	1,5509	75,9925	75,6291	19,8925			
UDARA												2060,6029												
Total	21110,5406	3846,3159	24956,8565	1490,1408	4351,2113	5841,3521	30990,5245	2410,7168	33401,2412	5516,2093	27885,0319	2060,6029	4998,5293	517,9300	465,7042	52,2258	5050,5051	5050,5051	27885,0319	8339,7656	1161,1847	20543,2201	28183,2698	7609,8141

Keterangan Instrumen		Keterangan Instrumen	
LC	Level Control		Nomor Aliran
FC	Flow Control		Temperatur
TC	Temperature Control		Tekanan

No.	KODE	NAMA ALAT
1	F-110	PENYIMPANAN ASETON
2	L-111	POMPA I
3	F-120	PENYIMPANAN SELULOSA
4	J-121	SCREW CONVEYOR I
5	J-122	BUCKET ELEVATOR I
6	F-151	HOPPER I
7	F-130	PENYIMPANAN NATRIUM HIDROKSIDA
8	L-131	POMPA II
9	F-140	PENYIMPANAN NATRIUM MONOKLOROASETAT
10	J-141	SCREW CONVEYOR III
11	J-142	BUCKET ELEVATOR III
12	F-221	HOPPER III
13	M-150	MIXER I
14	L-151	POMPA III
15	M-160	MIXER II
16	L-161	POMPA IV
17	R-210	REAKTOR I (ALKALISASI)
18	L-211	POMPA V
19	E-212	HEATER I
20	R-220	REAKTOR II (ETERIFIKASI)
21	L-221	POMPA VI
22	H-310	ROTARY VACUM FILTER
23	L-311	POMPA VII
24	J-312	SCREW CONVEYOR IV
25	B-320	ROTARY DRYER
26	G-321	BLOWER I
27	E-322	HEATER UDARA
28	G-324	MOLECULAR SIEVE TRAY
29	H-323	CYCLONE
30	J-324	COOLING SCREW CONVEYOR
31	J-325	BUCKET ELEVATOR IV
32	C-330	BALL MILL
33	J-331	SCREW CONVEYOR V
34	J-332	BUCKET ELEVATOR V
35	F-340	SILO PRODUK CMC
36	F-350	GUDANG PENYIMPANAN PRODUK CMC
37	E-312	HEATER II
38	D-350	MENARA DISTILASI
39	L-351	POMPA VIII
40	E-352	REBOILER
41	E-353	KONDENSOR
42	F-354	AKUMULATOR
43	L-355	POMPA IX
44	E-356	COOLER

Digambar Oleh	
Anita Ristikawati (21031010073)	
Dosen Pembimbing	TTD
Ir. Sutiyono, M.T.	
FLOWSHEET	
PRA RENCANA PABRIK CARBOXYMETHYL CELLULOSE (CMC) DENGAN METODE RUSSEL NELSON	
	PROGRAM STUDI TEKNIK KIMIA
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FLOWSHEET UTILITAS PRA RENCANA PABRIK CARBOXYMETHYL CELLULOSE (CMC) DENGAN METODE RUSSEL NELSON



NO	KODE	NAMA ALAT
1	F-110	BAK PENAMPUNGAN AIR SUNGAI
2	L-111	POMPA I
3	F-210	TANGKO KOAGULASI
4	L-211	POMPA II
5	F-220	TANGKO FLOKULASI
6	H-310	CLARIFIER
7	L-311	POMPA III
8	F-312	BAK PENAMPUNG FLOK
9	F-313	BAK PENAMPUNG AIR CLARIFIER
10	H-320	SAND FILTER
11	L-321	POMPA IV
12	F-322	BAK PENAMPUNG SAND FILTER
13	L-323	POMPA V
14	L-324	POMPA VI
15	L-325	POMPA VII
16	H-330	KATION EXCHANGER
17	H-340	ANION EXCHANGER
18	L-341	POMPA VIII
19	F-342	BAK PENAMPUNG AIR UMPAN BOILER DAN AIR PROSES
20	F-350	BAK PENAMPUNG AIR SANITASI
21	F-360	BAK PENAMPUNG AIR PENDINGIN
22	L-361	POMPA IX
23	F-370	BAK PENAMPUNG AIR PENDINGIN RETURN
24	L-371	POMPA X
25	P-380	COOLING TOWER
26	L-381	POMPA XI
27	E-390	BOILER

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