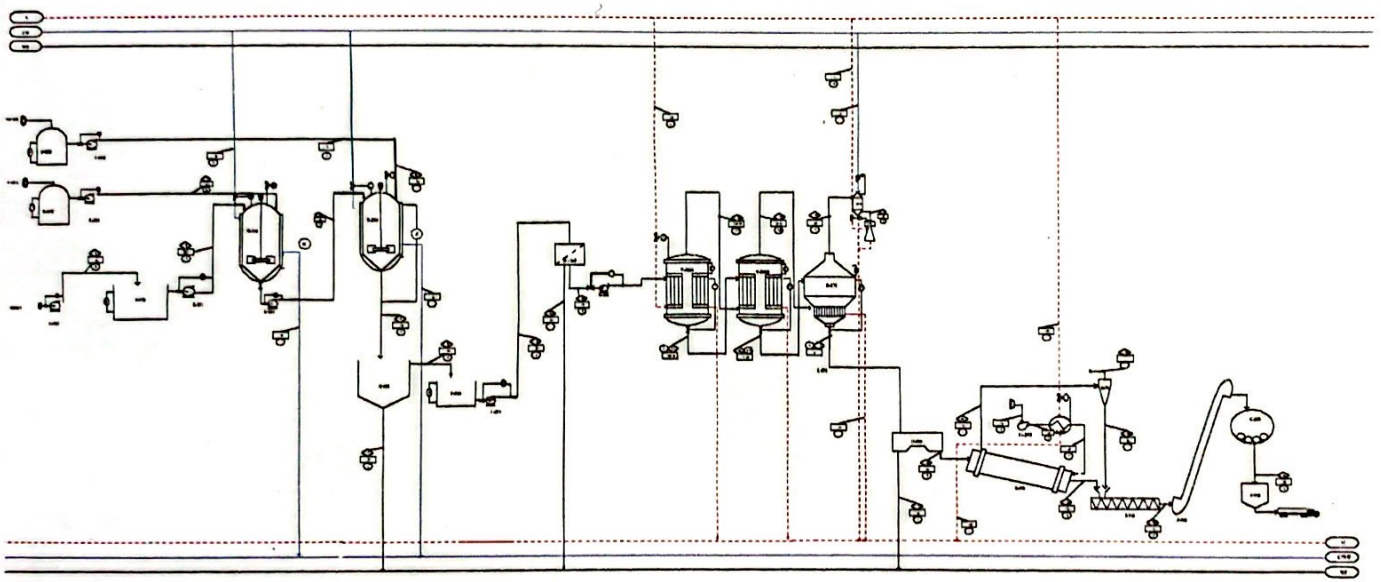
FLOWSHEET PABRIK GARAM INDUSTRI DENGAN PROSES PRESIPITASI DAN MULTIPLE EVAPORATOR



no	kode	nama alat	jumlah
29	F-330	Silo	1
28	C-320	Ball Mill	1
27	J-312	Bucket Elevator	1
26	J-311	Cooling Conveyor	1
25	E293	Heater	1
24	G-292	Fan Udara	1
23	H-291	Cyclone	1
22	B-290	Rotary Dryer	1
21	H-280	Centrifuge	1
20	B-270	Vacuum Pan Crystallizer	1
19	G-273	Jet Ejector	1
18	E-272	Barometric Condensor	1
17	L-271	Pompa Recycle	1
16	V-260	Evaporator	2
15	L-261	Pompa Evaporator 1	1
14	H-250	Filter	1
13	L-251	Pompa Filter	1
12	F-240	Tangki Penampung Sementara	1
11	H-230	Clarifier	1
10	R-220	Reaktor 2	1
9	L-221	Pompa Reaktor 2 -1	1
8	R-210	Reaktor 1	1
7	L-222	Pompa Reaktor 2 -2	1
6	L-212	Pompa Reaktor 1 -2	1
5	L-211	Pompa Reaktor 1 -1	1
4	F-130	Tangki Penyimpanan Na2CO3	1
3	F-120	Tangki Penyimpanan NaOH	1
2	L-111	Pompa Tangki Air Laut	1
1	F-110	Tangki Penampung Air Laut	1

Design oleh : Muhammad Nabil Zhilan Abdillah
NPM : 20031010047

Dosen Pembimbing : Dr. Ir. Srie Muljani, MT

FLOWSHEET PABRIK GARAM INDUSTRI DENGAN PROSES PRESIPITASI DAN MULTIPLE EVAPORATOR

PROGRAM STUDI
TEKNIK KIMIA
FAKULTAS TEKNIK DAN SAINS
UNIVERSITAS PEMBANGUNAN
NASIONAL "VETERAN" JAWA TIMUR
2024

Nomor / Komponen	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
MgSO4	10,37120923	10,37120923	-	10,37120923	-	10,37120923	0,207424185	1,071849115	1,071849115	-	21,07346641	21,07346641	-	21,07346641	-	21,07346641	-	-	20,01977409	1,053672321	0,001053672	1,052618648	1,053672-05	0,001043156	1,053662	1,053662
MgCl2	6,482005760	6,482005760	-	6,648200577	-	0,777640692	0,015556014	0,762283878	0,762283878	-	1,560508481	1,560508481	-	1,560508481	-	1,560508481	-	-	1,501430957	0,070025424	7,002542E-05	0,069936399	7,002542E-07	0,000070235	0,070025	0,070025
CaSO4.2H2O	2,074241646	2,074241646	-	1,148035015	-	0,228166603	0,004563332	0,223603271	0,223603271	-	0,463615823	0,463615823	-	0,463615823	-	0,463615823	-	-	0,446433505	0,021110781	2,110108E-05	0,021315761	0,001908898	0,100988995	0,212147	0,212147
NaCl	19446,01751	19446,01751	-	19446,01751	-	19446,01751	389,0730397	19004,75918	19004,75918	-	21535,95312	21535,95312	-	21535,95312	-	21535,95312	-	-	2466,551292	129,8114809	0,129811489	129,6486705	0,001298185	0,125128304	129,817191	129,817191
H2O	110156,5024	110156,5024	-	110156,5024	-	110156,5024	2203,130049	107953,3724	107953,3724	-	114761,1243	64503,74214	50179,38216	21509,83591	43071,90623	7152,533831	14357,30208	-	6794,907139	357,6260015	334,727792	18,89899951	0,001889989	0,187099105	19,08999081	19,08999081
impurities	18,66817062	18,66817062	-	18,66817062	-	18,66817062	13,06772363	5,600452985	5,600452985	5,600452985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mg(OH)2	-	-	-	3,572830383	-	3,572830383	2,509981266	1,071849115	1,071849115	1,071849115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NaCl	-	-	-	7,161591754	-	7,790179687	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CaCl2 +	-	-	-	0,401690056	-	0,401690056	0,281183039	0,120507017	0,120507017	0,120507017	0,016201243	0,016201243	-	0,016201243	-	0,016201243	-	-	0,775391181	0,000810062	4,081010E-05	0,000769252	2,110108E-07	0,000022049	0,040792	0,040792
Na2SO4	-	-	-	0,770195134	-	0,770195686	0,537159378	0,233027908	0,233027908	0,233027908	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NaOH	-	-	6,000067959	1,074560505	-	1,074560505	0,021493378	1,053077527	1,053077527	-	2,183435860	2,183435860	-	2,183435860	-	2,183435860	-	-	2,074260876	0,109171793	0,000109172	0,109026622	1,091728-06	0,000100000	0,109171	0,109171
Mg(OH)2	-	-	-	-	-	0,457505291	0,320253704	0,137251587	0,137251587	0,137251587	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CaCO3	-	-	-	-	-	0,530665628	0,371466994	0,159199688	0,159199688	0,159199688	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Na2CO3(s)	-	-	-	-	1,423990614	0,284799723	0,199359806	0,085439917	0,085439917	0,085439917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Na2CO3(l)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18939,58334	18,93958334	18920,64375	0,189395833	18,750187502	18939,393939	18939,393939
TOTAL	129640,1154	129640,1154	6,000067959	129646,329	1,423990614	129639,6403	2609,723517	127028,623	127028,623	7,600262215	136323,1946	86143,81246	50179,38216	43071,90623	43071,90623	28714,60415	14357,30208	-	9286,209778	19428,33438	357,708497	19070,53508	0,194509338	19,256048308	19089,791925	19089,791925

Dipindai dengan CamScanner