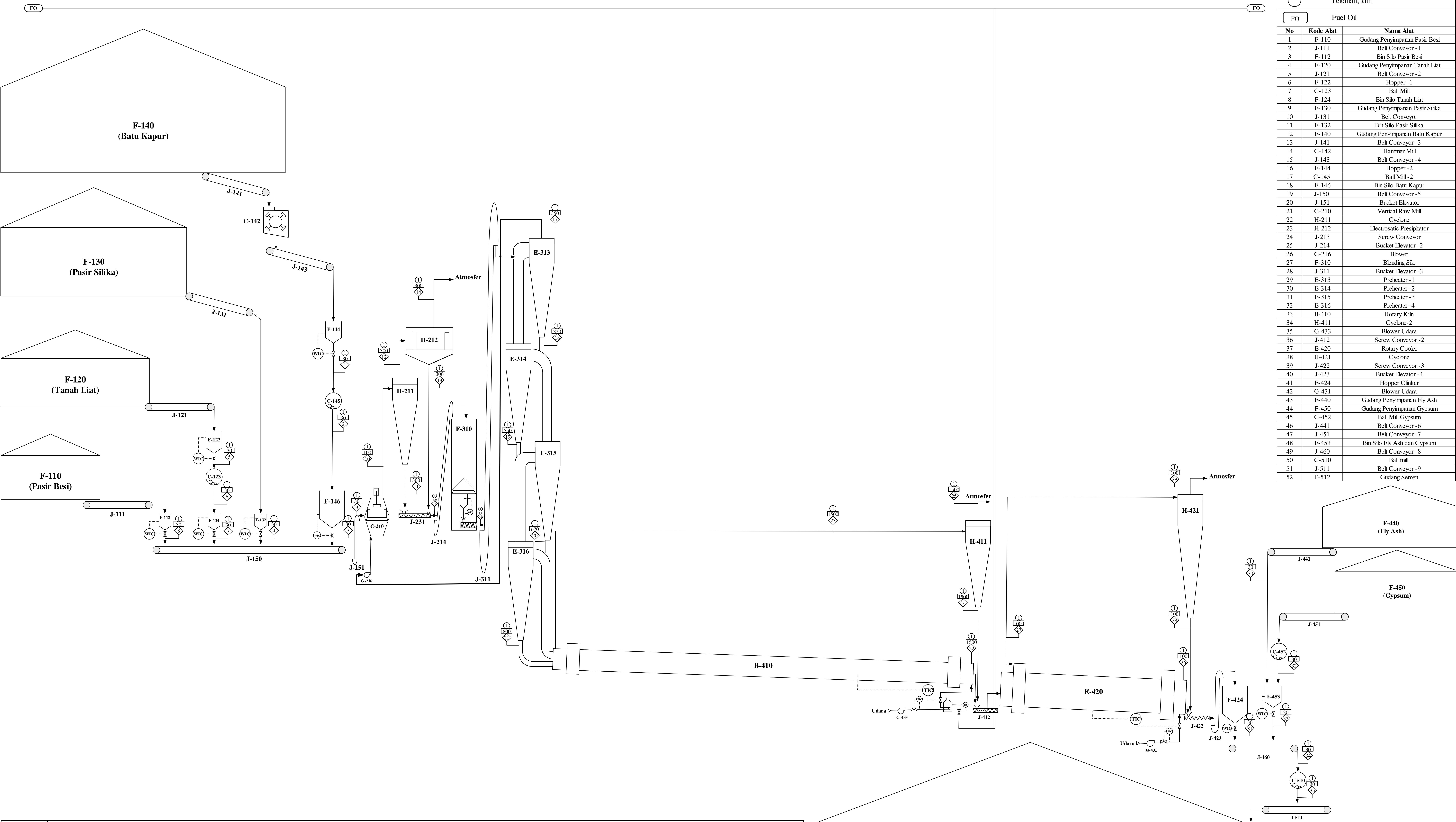


PRA RANCANGAN PABRIK ORDINARY PORTLAND CEMENT (OPC) DARI FLY ASH SEBAGAI BAHAN FILLER DENGAN DRY PROCESS

Skala 1:200

Keterangan		
	Temperatur; °C	
	Aliran massa; Kg/ Jam	
	Tekanan; atm	
	Fuel Oil	
No	Kode Alat	Nama Alat
1	F-110	Gudang Penyimpanan Pasir Besi
2	J-111	Belt Conveyor -1
3	F-112	Bin Silo Pasir Besi
4	F-120	Gudang Penyimpanan Tanah Liat
5	J-121	Belt Conveyor -2
6	F-122	Hopper -1
7	C-123	Ball Mill
8	F-124	Bin Silo Tanah Liat
9	F-130	Gudang Penyimpanan Pasir Silika
10	J-131	Belt Conveyor
11	F-132	Bin Silo Pasir Silika
12	F-140	Gudang Penyimpanan Batu Kapur
13	J-141	Belt Conveyor -3
14	C-142	Hammer Mill
15	J-143	Belt Conveyor -4
16	F-144	Hopper -2
17	C-145	Ball Mill -2
18	F-146	Bin Silo Batu Kapur
19	J-150	Belt Conveyor -5
20	J-151	Bucket Elevator
21	C-210	Vertical Raw Mill
22	H-211	Cyclone
23	H-212	Elektrosatic Presipitator
24	J-213	Screw Conveyor
25	J-214	Bucket Elevator -2
26	G-216	Blower
27	F-310	Blending Silo
28	J-311	Bucket Elevator -3
29	E-313	Preheater -1
30	E-314	Preheater -2
31	E-315	Preheater -3
32	E-316	Preheater -4
33	B-410	Rotary Kih
34	H-411	Cyclone-2
35	G-433	Blower Udara
36	J-412	Screw Conveyor -2
37	E-420	Rotary Cooler
38	H-421	Cyclone
39	J-422	Screw Conveyor -3
40	J-423	Bucket Elevator -4
41	F-424	Hopper Clinker
42	G-431	Blower Udara
43	F-440	Gudang Penyimpanan Fly Ash
44	F-450	Gudang Penyimpanan Gypsum
45	C-452	Ball Mill Gypsum
46	J-441	Belt Conveyor -6
47	J-451	Belt Conveyor -7
48	F-453	Bin Silo Fly Ash dan Gypsum
49	J-460	Belt Conveyor -8
50	C-510	Ball mill
51	J-511	Belt Conveyor -9
52	F-512	Gudang Semen



Komponen	Nomor	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	23	24	25	26	27	28	29	30	31	32	33	34			
CaCO ₃	1.304	1.304	1.304																																			
SiO ₂	365.822	365.822	365.822	4.868	97.7245	97.7245	97.7245	259.449	5.591	5.591	5.535	55.9125	55.3534	0.55913	5.590.69	5.590.69	5.590.69	5.590.69	5.590.69	57.552	1.15104	1.13953	0.01151	58.1046	0.58091	0.58105	0.00587											
Al ₂ O ₃	115.633	115.633	115.633	13.1729	1.551.92	1.551.92	1.551.92	21.895	1.703	1.703	1.686	17.0262	16.856	0.17026	1.702.45	1.702.45	1.702.45	1.702.45	1.702.45	247.553	4.95107	4.90156	0.04951	249.93	2.52455	2.4993	0.02525											
FesO ₃	26.2803	26.2803	26.2803	63.5737	120.009	120.009	120.009	864.283	1.074	1.074	1.063	10.7415	10.634	0.10741	1.074.04	1.074.04	1.074.04	1.074.04	1.074.04	371.823	7.43647	7.3621	0.07436	375.394	3.79186	3.75394	0.03792											
CaO	15.873	15.873	15.873	694.443	607.934	607.934	607.934	107.577	17.283	17.283	17.110	172.832	171.104	1.72832	17.282	17.282	17.282	17.282	17.282	1.685	33.6965	33.3595	0.33696	1.701	17.1818	17.01	0.17182											
TO ₂				8.59104	8.59104	8.59104	8.59104	0.08591	0.08505	0.00086	8.59019	8.590186	0	8.590186	8.59019	8.59019	8.590186	8.59019	0.1718	0.17009	0.00172	8.67267	0.0876	0.08673	0.00088													
MgO				17.1821	156.067	156.067	156.067		173.25	173.25	171.517	1.7325	1.71517	0.01732	173.232	173.232	173.232	173.232	173.232	3.46464	3.43	0.03465	174.896	1.76662	1.74896	0.01767												
K ₂ O				61.5518	61.5518	61.5518	61.5518	60.9363	0.61552	0.60936	0.00616	61.5457	61.54569	0	61.54569	61.5457	61.5457	61.5457	1.23091	1.2186	0.01231	62.1367	0.62764	0.62137	0.00628													
Na ₂ O				40.2567	40.2567	40.2567	40.2567	39.8541	0.40257	0.39854	0.00403	40.2526	40.25263	0	40.25263	40.2526	40.2526	40.2526	0.80505	0.797	0.00805	40.6391	0.4105	0.40639	0.0041													
H ₂ O	1.093	1.093	1.093		266.044	266.044	266.044	1.359	845	844.545	514.759	509.611	5.14759	1.354.16	1.354.16	1.354.16	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CO ₂																																						
CaSO ₄																																						
CaSiO ₃																																						
CaAl ₂ O ₆																																						
CaAl ₂ Fe ₂ O ₉																																						
Fly Ash																																						
Gypsum																																						
Total	21024	21024	18778	5665	2917	2917	2902	1253	28598	28598	28598	787	779	8	28590	28590	1354	27236	27236	27236	27236	27236	1100	533	567	27166	274	272	3	2355	26878	1372	27438	30731				

F-512 (Gudang Semen)

FLWSHEET PABRIK ORDINARY PORTLAND CEMENT (OPC) DARI FLY ASH SEBAGAI BAHAN FILLER DENGAN DRY PROCESS

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