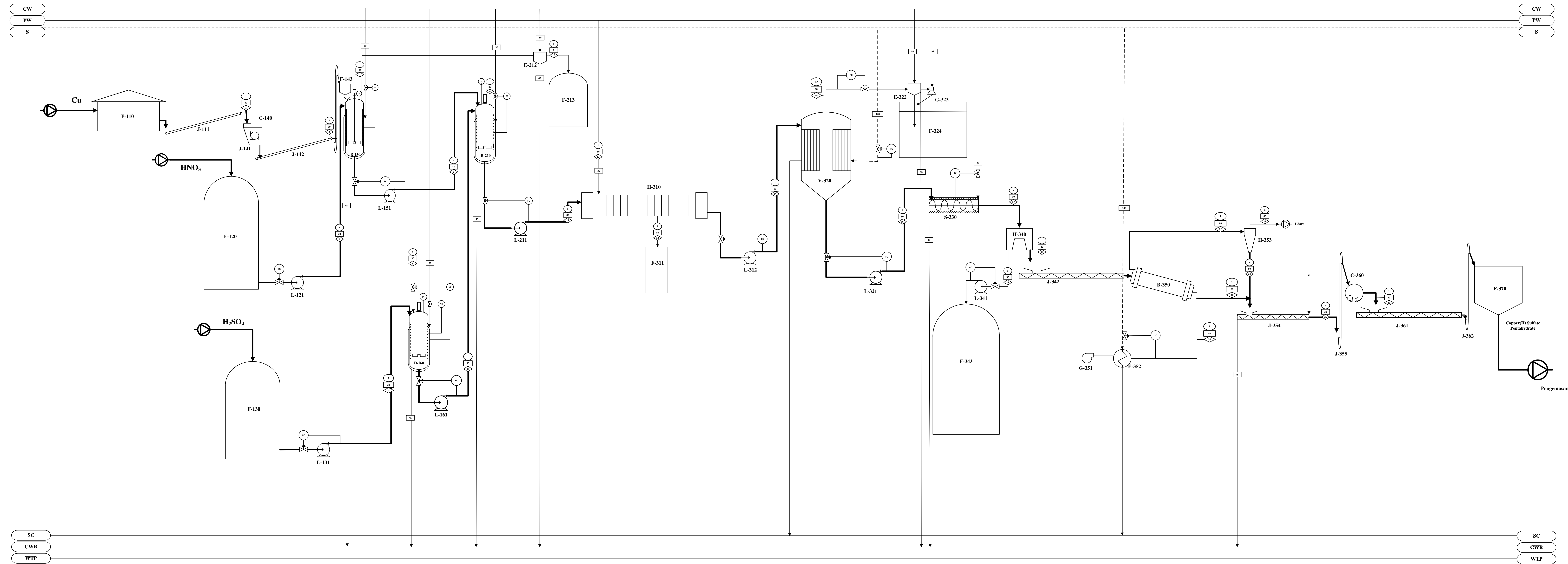


FLOWSHEET PABRIK COPPER(II) SULFATE PENTAHYDRATE DARI TEMBAGA BEKAS DAN ASAM SULFAT DENGAN EVAPORATION PROCESS



Keterangan :

- Temperatur ; °C
- ◇ Aliran Massa ; kg/jam
- Tekanan ; atm
- S Steam
- SC Steam Condensate
- CW Cooling Water
- CWR Cooling Water Return
- PW Process Water
- WTP Waste Treatment Plant

No.	Kode	Nama Alat
1	F-110	Gudang Tembaga Bekas
2	J-111	Belt Conveyor 1
3	F-120	Tangki Penyimpanan HNO ₃
4	L-121	Pompa 1
5	F-130	Tangki Penyimpanan H ₂ SO ₄
6	L-131	Pompa 2
7	C-140	Rotary Cutter
8	J-141	Belt Conveyor 2
9	J-142	Bucket Elevator 1
10	F-143	Hopper
11	R-150	Reaktor 1
12	L-151	Pompa 3
13	D-160	Tangki Pengenceran H ₂ SO ₄
14	L-161	Pompa 4
15	R-210	Reaktor 2
16	L-211	Pompa 5
17	E-212	Kondensor
18	F-213	Tangki Penyimpanan Nox
19	H-310	Rotary Drum Vacuum Filter
20	F-311	Bak Penampung Cake
21	L-312	Pompa 6
22	V-320	Evaporator
23	L-312	Pompa 7
24	E-322	Barometric Condensor
25	G-323	Jet Ejector
26	F-324	Water Trap
27	S-330	Crystallizer
28	H-340	Centrifuge
29	L-341	Pompa 8
30	F-343	Tangki Penyimpan Mother Liquor
31	J-342	Screw Conveyor 1
32	B-350	Rotary Dryer
33	G-351	Blower
34	E-352	Heater Udara
35	H-353	Cyclone
36	J-354	Cooling Conveyor
37	J-355	Bucket Elevator 2
38	C-360	Ball Mill
39	J-361	Screw Conveyor 2
40	J-362	Bucket Elevator 3
41	F-370	Silo Produk

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	23	24	25	26		
Cu	1463,4938	1463,4938																										
Impuritis (Pb)	146,3494	146,3494				146,3494					146,3494		146,3494															
HNO ₃			3831,3963																									
H ₂ O			2063,0596	45,6419	4405,1301	2610,9231		4450,7720			7468,4837	575,5910	149,3697	7894,7050	5069,1562	2825,5489	1230,9907	61,5495	1169,4412							8,7509	8,7509	
H ₂ SO ₄				2236,4507				2236,4507																			1,0959	1,0959
Cu(NO ₃) ₂						4276,8015					42,7680		0,8554	41,9127		41,9127	41,9127	2,0956	39,8170							2,0956	2,0956	
Sisa Cu						14,6349					14,6349		14,6349															
NO							455,5902																					
CuSO ₄											3603,5336		72,0707	3531,4629		3531,4629	706,3872	35,3194	671,0679							35,3194	35,3194	
NO ₂																												
O ₂											2076,6065		2076,6065															
CuSO ₄ .5H ₂ O											361,1886		361,1886															
Uap Air																												
Udara Kering																												
Total	1609,8432	1609,8432	5894,4559	2282,0925	4405,1301	7048,7089	455,5902	6687,2227	2437,7951	2893,3853	11298,1342	575,5910	383,7273	11489,9978	5069,1562	6420,8417	6420,8417	4519,6943	1901,1474	24732,9437	4422,6993	96,9950	53,2406	43,7544	4466,4536	4466,4536		

PRA RENCANA PABRIK COPPER(II) SULFATE
PENTAHYDRATE DARI TEMBAGA BEKAS DAN ASAM
SULFAT DENGAN EVAPORATION PROCESS

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