



**PRA RENCANA PABRIK
“PABRIK POLIPROPILEN DARI PROPILEN DENGAN PROSES
UNIPOL KAPASITAS 60000 TON/TAHUN”**

DAFTAR PUSTAKA

- Benitez, J., “*Fabric Filters. In : Process Engineering and Design for Air pollution Control*”, Englewood Cliffs., Prentice Hall, 1993.
- Bird, R.B., and Robert D. Newton, “*Chemical Engineering Cost Estimation*”, Mc. Graw Hill Book Co, New York, 1955.
- Brownell, L.E., and Young, E.H., “*Process Equipment Design*”, John Willey and Sons Inc., New York, 1959.
- Ferrero, M. A., and Mario, G. C., “*Preliminary Design of A Loop Reactor For Bulk Propylene Polymerization*”, Univercidad Nacional del Litoral Guemes., Argentina, 1990
- Foust, A.S., “*Principles of Unit Operations*”, 2nd ed., John Willey and Sons Inc., New York, 1980.
- Fried, J. R., “*Polymer Science and Technology, Third Edition*”, Pearson Education, Inc., United States of America. 2014.
- Geankoplis, C. J., “*Transport Process and Unit Operation*”, Ally and Bacon, New York, 1997.
- Kern, D.Q., “*Process Heat Transfer*”, International Student Edition, Mc. Graw Hill International Book Co., Tokyo, 1965.
- Kissin, Y.V., “*Active centers in Ziegler Natta Catalyst : Formation kinetics and sturctur*”, Journal of Catalysis 292 (188-200), United States, 2012.
- Ludwig, B.E., “*Applied Process Design for Chemical and Petrochemical Plant*”, 2nd ed., Gulf Publishing Co., Houston, Texas, 1988.
- Malpass, D. B., and Elliot I. B., “*Introduction to Industrial Polypropylene*”, John Willey and Sons Inc., New York., 2012.
- Perry, R.H., “*Perry’s Chemical Engineering Handbook*”, 6nd ed., Mc. Graw Hill Book Co., New York, 1984.
- Peters, M.S., Klaus D. Timmerhaus and Ronald E. West, “*Plant Design and Economics for Chemical Engineer*”, 5th ed., Mc Graw Hill International Edition, Singapore, 2004.
-



PRA RENCANA PABRIK

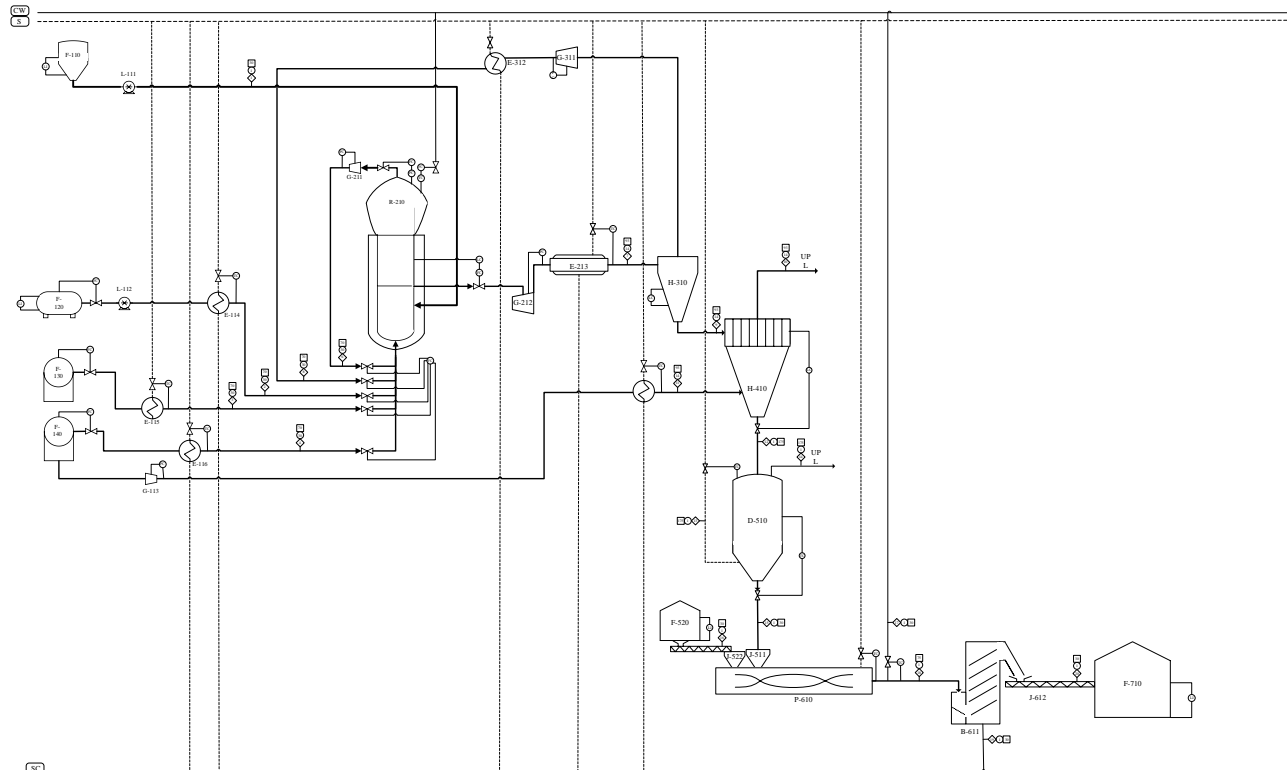
“PABRIK POLIPROPILEN DARI PROPILEN DENGAN PROSES UNIPOL KAPASITAS 60000 TON/TAHUN”

-
- Severn, W.H., et al, “*Steam, Air and Gas Power*”, 5th ed., John Willey and Sons Inc., New York, 1959.
- Smith, J.M., and H.C. Van Ness, “*Introduction to Chemical Engineering Thermodynamics*”, 5th ed., Mc. Graw Hill Book Co., New York, 1996.
- Stevens, M.P., “*Polymer Chemistry an Incrtroduction* ”, Oxford University Press., New York, 1999.
- Terano, M., Kouhei K., and Kazuhiro I., “*A kinetic argument for a quasi-living polymerization of propene with a MgCl₂-supported catalyst*”, Numazu College of Technology., Japan, 1987.
- Ulrich, G.D., “*A Guide of Chemical Process Design and Economics*”, John Willey and Sons Inc., New York, 1984.
- Heggs, T.G., “*Ullmann’s Encyclopedia of Industrial Chemistry*”, Wiley-VCH Verlag GmbH & Co. KGaA., Weinheim, 2012.
- Yaws, C.L., “*Chemical Properties Handbook*”, Mc. Graw Hill Book Co., Tokyo., 1988.



PRA RENCANA PABRIK "PABRIK POLIPROPILEN DARI PROPILEN DENGAN PROSES UNIPOL KAPASITAS 60000 TON/TAHUN"

Pra Rencana Pabrik Polipropilen dengan proses Unipol



Keterangan

	Flow mass (kg/jam)
	Temperature (°C)
	Pressure (atm)
	Cooling Water
	Steam
	Steam Condensate
	Cooling Water Return

28	F-710	SILO POLIPROPILEN	1
27	J-412	BELT CONVEYOR	1
26	B-411	CENTRIFUGAL DRYER	1
25	P-610	EXTRUDER PELLETIZER	1
24	J-522	HOPPER ANTI-OXIDANT	1
23	J-521	BELT CONVEYOR ANTI-OXIDANT	1
22	F-520	TANGKI PENYIMPANAN ANTI-OXIDANT	1
21	J-511	HOPPER	1
20	D-510	BLOW TANK	1
17	H-410	BAG FILTER	1
19	E-312	HEATER RECYCLE	1
18	G-311	KOMPRESOR RECYCLE	1
16	H-310	CYCLONE	1
14	E-213	FLASH LINE	1
13	G-212	EXPANDER REAKTOR	1
12	G-211	KOMPRESOR REFLUKS	1
11	R-210	BUBBLE FLUIDIZED BED REAKTOR	1
10	E-116	HEAT EXCHANGER NITROGEN	1
9	E-115	HEAT EXCHANGER HYDROGEN	1
8	E-114	HEAT EXCHANGER PROPILEN	1
7	G-113	EXPANDER NITROGEN	1
6	L-112	POMPA PROPILEN	1
5	L-111	POMPA KATALIS	1
4	F-140	TANGKI PENYIMPANAN NITROGEN	1
3	F-130	TANGKI PENYIMPANAN HYDROGEN	1
2	F-120	TANGKI PENYIMPANAN PROPILEN	1
1	F-110	TANGKI PENYIMPANAN KATALIS	1
NAMA ALAT		JUMLAH	

Komponen/Aliran	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TiCl4	16.7528						16.7528		16.7528			16.7528		16.7528							
Al(C2H5)3	8.2514						8.2514		8.2514			8.2514		8.2514							
C3H6		7501.2693			150.0254	150.0254	3.0005	0.6001	2.4004	2.4004											
H2			1.8836																		
N2				52.9840	51.9243	41.3275	32.9840	10.5968	42.3872	52.9840	10.5968										
C3H6n																					
C73H108O12																					
Steam																					
H2O																					

DEKAMBAR GILER : FABRIN KARUNIA
NPM : 1301100126
DOSEN PEMBIMBING : DR. DR. SUCILOWATI, M. S.

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