ABSTRAK

PRARANCANGANPABRIK KALSIUMHIPOKLORIT
DENGAN KAPASITAS40.000 TON/TAHUN
(Perancangan Spray Dryer301(SD-301))

Oleh

FRANSISKAPURBA

PabrikKalsiumhipokloritberbahanbakukalsiumhidroksidadanAsamhipoklorit,direncanakandidirikandiGresik, JawaTimur.Pendirianpabrikberdasarkanataspertimbanganakanketersediaanbahanbaku,saranatransportasiyangmemadai, tenagakerjayangmudahdidapatkandankondisilingkungan.

PabrikdirencanakanmemproduksiKalsiumHipokloritsebanyak40.000 ton/tahun, denganwaktuoperasi 24 jam/hari, 330 hari/tahun. Bahanbakuyang digunakanadalahKalsiumHidroksidasebanyak2.369,3655 kg/jamdanAsamHipokloritsebanyak5.477,5570 kg/jam.

Penyediaankebutuhanutilitaspabrikterdiridari unitpengadaanair, pengadaanlistrik,pengadaanudara instrument,pengadaan*refrigerant*,danpengadaan*steam*.

BentukperusahaanadalahPerseroan Terbatas(PT) menggunakanstrukturorganisasi*line* dan*staff*denganjumlahkaryawansebanyak136 orang.

Dari analisisekonomidiperoleh:

Fixed Capital Investment	(FCI)	=	Rp 221.976.797.139
Working Capital Investment	(WCI)	=	Rp 39.172.375.105
Total Capital Investment	(TCI)	=	Rp 261.149.173.105
BreakEven Point	(BEP)	=	55,25 %
Shut Down Point	(SDP)	=	20,57 %
PayOut Timebeforetaxes	$(POT)_b$	=	1,41 tahun
PayOut Timeafter taxes	$(POT)_a$	=	1,71 tahun
Return on Investmentbeforetaxes	$(ROI)_b$	=	51,59 %
Return on Investmentafter taxes	$(ROI)_a$	=	41,27 %
Discounted cash flow	(DCF)	=	81,42 %

Mempertimbangkanpaparandiatas,sudahselayaknyapendirianpabrikKalsium Hipokloritinidikajilebihlanjut,karenamerupakanpabrikyangmenguntungkandanmempunyaimasadepanyangbaik.

ABSTRACT

PRE-DESIGN MANUFACTURINGOFCALCIUMHYPOCHLORITE WITH CAPACITY OF40.000TONS/YEAR (DesignofSpray Dryer301(SD-301))

By

FRANSISKAPURBA

CalciumHypochlorite plantwithraw materialscalciumhydroxideand hypochloriteacidwillbebuildinGresik,East Java.Establishmentofthis plantin EastJavadueto rawmaterialresourcess,transportation,laborsandalso environmental condition.

Thisplantwillproduce40.000tons/year,withtime of operation24 hours/day,and330daysonayear.The raw materialwhichuse arecalcium hydroxide 2.369,3655 kg/hour and hypochloriteacid5.477,5570 kg/hour.

Thisplanthasutilityunits whichthefunctionareforwatertreatment, watersupply,airinstrument unit,powergeneration, refrigerant unit, and steam.

Thebussinesentity ofthisplantislimitedliability company(PT)and usingline and staffstructurewith 136 labors.

From financial annalyze:

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Considerthesummaryabove,itisproperestablishmentofCalciumHypochlorite plantis studied further, because the plantis profitable andhasgood prospects.