

LAMPIRAN 1

PERHITUNGAN BIAYA BAHAN BAKU

TEGEL ABU-ABU

		PER M ²	PER UNIT
Semen Abu-abu	8 x $\frac{9.000}{40}$	1.800	72
Steam Mill	4 x 100	400	16
Pasir Kasar	0,185 x 12.000	2.220	88,8
Pasir Halus	10 x 50	500	20
Trass	7,5 x 25	187,5	7,5
		<u>5.107,5</u>	<u>204,3</u>

TEGEL KEMBANG

		PER M ²	PER UNIT
Semen Abu-abu	4,5 x $\frac{9.000}{40}$	1.012,5	40,5
Steam Mill	9 x 100	900	36
Semen Putih	3,5 x $\frac{19.000}{40}$	1.662,5	66,5
Pasir Kasar	0,185 x 12.000	2.220	88,8
Pasir Halus	10 x 50	500	20
Trass	4,5 x 25	112,5	4,5

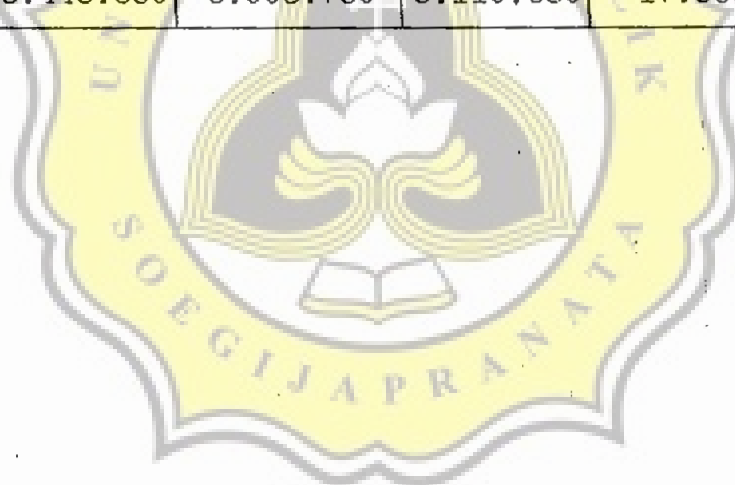
TEGEL TERASO

		PER M ²	PER UNIT
Semen Abu-abu	4,5 x $\frac{9.000}{40}$	1.012,5	92
Semen Putih	9,5 x $\frac{19.000}{40}$	4.512,5	410,23
Batu Teraso	10 x 150	1.500	136,4
Pasir Kasar	0,25 x 12.000	3.000	272,7
Pasir Halus	5,5 x 50	275	25
Trass	5 x 25	125	11,36
		<u>10.425</u>	<u>947,70</u>

LAMPIRAN 2

PERINCIAN B.O.P
TAHUN 1996

BULAN	BIAYA LISTRIK	BIAYA PEMELIHARAAN MESIN	BIAYA LAIN-LAIN	TOTAL B.O.P
JANUARI	520.000	516.930	499.800	1.536.730
FEBRUARI	521.400	512.800	415.800	1.450.000
MARET	520.500	546.600	232.900	1.300.000
APRIL	530.000	470.700	399.300	1.400.500
MEI	525.700	464.700	509.600	1.500.000
JUNI	547.850	477.200	485.450	1.510.500
JULI	545.900	494.500	379.700	1.420.100
AGUSTUS	530.000	560.200	309.800	1.400.000
SEPTEMBER	551.900	473.225	399.875	1.425.000
OKTOBER	547.900	492.100	485.000	1.525.000
NOVEMBER	547.500	474.575	493.625	1.515.700
DESEMBER	555.000	525.200	499.800	1.580.000
JUMLAH	6.443.650	6.008.730	5.110.650	17.563.530



**PEMISAHAN B O P BERDASARKAN
METODE TITIK TERTINGGI DAN TERENDAH**

BULAN	KAPASITAS PRODUKSI (X)	TOTAL B O P (Y)
JANUARI	41.380	1.536.730
FEBRUARI	41.414	1.450.000
MARET	41.964	1.300.000
APRIL	43.584	1.400.500
MEI	42.869	1.500.000
JUNI	46.213	1.510.500
JULI	45.332	1.420.000
AGUSTUS	43.292	1.400.000
SEPTEMBER	47.528	1.425.000
OKTOBER	46.544	1.525.000
NOVEMBER	46.477	1.515.700
DESEMBER	49.497	1.580.000

Dari data di atas dapat dihitung besarnya BOP variabel :

$$\begin{aligned}
 \text{BV/unit} &= \frac{(b_1 - b_2)}{(k_1 - k_2)} \\
 &= \frac{1.580.000 - 1.536.730}{49.497 - 41.380} \\
 &= \frac{43.270}{8.177} \\
 &= 5,33
 \end{aligned}$$

LAMPIRAN 3

FORECASTING

DATA TEGEL ABU-ABU
(Satuan M²)

TAHUN	PENJUALAN (Y)	X	X ²	X.Y
1989	11.200	-3	9	- 33.600
1990	10.450	-2	4	- 20.900
1991	10.625	-1	1	- 10.625
1992	11.055	0	0	0
1993	11.810	1	1	11.810
1994	10.996	2	4	21.992
1995	11.110	3	9	33.330
JUMLAH	77.246	0	28	2.007

$$a = \frac{\sum Y}{n} = \frac{77.246}{7} = 11.035,14$$

$$b = \frac{\sum X.Y}{\sum X^2} = \frac{2.007}{28} = 71,68$$

Persamaan forecasting :
 $Y' = 11.035,14 + 71,68 (X)$

Forecasting untuk :

Tahun 1996

$$X_1 = 5 ; Y' = 11.035,14 + 71,68 (5)$$

$$Y' = 11.035,14 + 286,72$$

$$Y' = 11.321,72 \text{ M}^2$$

$$= 283.043 \text{ unit}$$

Tahun 1997

$$X_1 = 6 ; Y' = 11.035,14 + 71,68 (6)$$

$$Y' = 11.035,14 + 358,4$$

$$Y' = 11.393,54 \text{ M}^2$$

$$= 284.839 \text{ unit}$$

DATA TEGEL KEMBANG
(Satuan M²)

TAHUN	PENJUALAN (Y)	X	X ²	X.Y
1989	6.962	-3	9	- 20.886
1990	6.150	-2	4	- 12.300
1991	5.945	-1	1	- 5.945
1992	6.250	0	0	0
1993	6.875	1	1	6.875
1994	7.100	2	4	14.200
1995	7.250	3	9	21.750
JUMLAH	46.532	0	28	3.694

$$a = \frac{Y}{n} = \frac{46.532}{7} = 6.647,43$$

$$b = \frac{X.Y}{X^2} = \frac{3.694}{28} = 131,93$$

Persamaan forecasting :

$$Y' = 6.647,43 + 131,93 (X)$$

Forecasting untuk :

Tahun 1996

$$X_2 = ; Y' = 6.647,43 + 131,93 (5)$$

$$Y' = 6.647,43 + 527,72$$

$$Y' = 7.175,15 \text{ M}^2$$

$$= 179.379 \text{ unit}$$

Tahun 1997

$$X_2 = ; Y' = 6.647,43 + 131,93 (6)$$

$$Y' = 6.647,43 + 659,65$$

$$Y' = 7.307,08 \text{ M}^2$$

$$= 182.677 \text{ unit}$$

DATA TEGEL TERASO
(Satuan M²)

TAHUN	PENJUALAN (Y)	X	X ²	X.Y
1989	8.250	-3	9	- 24.750
1990	8.725	-2	4	- 17.450
1991	8.910	-1	1	- 8.910
1992	9.114	0	0	0
1993	9.255	1	1	9.255
1994	9.326	2	4	18.652
1995	9.675	3	9	29.025
JUMLAH	63.255	0	28	5.822

$$a = \frac{\sum Y}{n} = \frac{63.255}{7} = 9.036,43$$

$$b = \frac{\sum X.Y}{\sum X^2} = \frac{5.822}{28} = 207,93$$

Persamaan forecasting :

$$Y' = 9.036,43 + 207,93 (X)$$

Forecasting untuk :

Tahun 1996

$$X_3 = 5 ; Y' = 9.036,43 + 207,93 (5)$$

$$y' = 9.036,43 + 831,72$$

$$y' = 9.868,15 \text{ M}^2$$

$$= 108.550 \text{ unit}$$

Tahun 1997

$$X_3 = 6 ; Y' = 9.036,43 + 207,93 (6)$$

$$Y' = 9.036,43 + 1.039,65$$

$$Y' = 10.076,08 \text{ M}^2$$

$$= 110.837 \text{ unit}$$

Max +22.8700X1 +73.3700X2 +286.970X3
 Subject to
 (1) +.017800X1 +.022200X2 +.028300X3 ≤ +11740.0
 (2) +1.00000X1 +1.00000X2 +2.27000X3 ≤ +1800000
 (3) +1.00000X1 +1.00000X2 +2.27000X3 ≤ +843750
 (4) +1.00000X1 +1.00000X2 +2.27000X3 ≤ +1000000
 (5) +1.00000X1 +0 X2 +0 X3 ≤ +283043
 (6) +0 X1 +1.00000X2 +0 X3 ≤ +179379
 (7) +0 X1 +0 X2 +1.00000X3 ≤ +108550
 (8) +1.00000X1 +0 X2 +0 X3 ≥ +0
 (9) +0 X1 +1.00000X2 +0 X3 ≥ +0
 (10) +0 X1 +0 X2 +1.00000X3 ≥ +0

Summarized Results for MAX.TEGEL JAYA 1996

Variable No.	Names	Solution	Opportunity Cost	Variable No.	Names	Solution	Opportunity Cost
1	X1	+263248.38	0	8	S5	+19794.631	0
2	X2	+179379.00	0	9	S6	0	+44.846745
3	X3	+108550.00	0	10	S7	0	+250.60927
4	S1	0	+1284.8315	11	S8	+263248.38	0
5	S2	+1110964.1	0	12	S9	+179379.00	0
6	S3	+154714.16	0	13	S10	+108550.00	0
7	S4	+310964.12	0				

Maximized OBJ. function = 5.033212E+07 Iters. = 3

Sensitivity Analysis for Objective Coefficients

Page : 1

Variable	Min. C(j)	Original	Max. C(j)	Variable	Min. C(j)	Original	Max. C(j)
X1	0	+22.8700	+58.8282	X3	+36.3607	+286.970	+Infinity
X2	+28.5233	+73.3700	+Infinity				

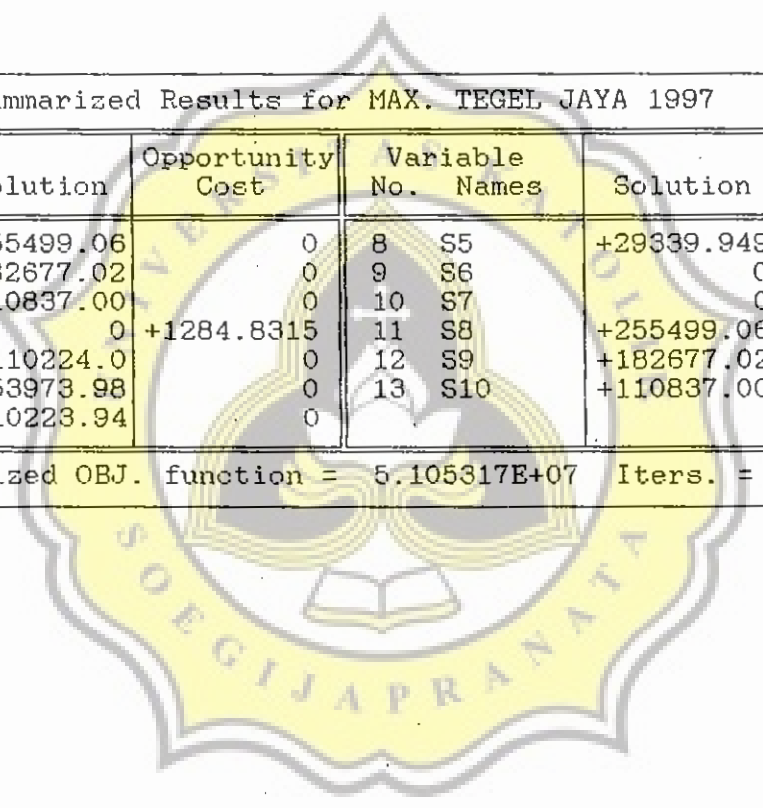
Sensitivity Analysis for RHS

Page : 1

Constrnt	Min. B(i)	Original	Max. B(i)	Constrnt	Min. B(i)	Original	Max. B(i)
1	+7054.18	+11740.0	+12092.3	6	+163508	+179379	+390452
2	+689036	+1800000	+Infinity	7	+96099.7	+108550	+274127
3	+689036	+843750	+Infinity	8	-Infinity	0	+263248
4	+689036	+1000000	+Infinity	9	-Infinity	0	+179379
5	+283248	+283043	+Infinity	10	-Infinity	0	+108550

Max +22.8700X1 +73.3700X2 +286.970X3
 Subject to
 (1) +.017800X1 +.022200X2 +.028300X3 ≤ +11740.0
 (2) +1.00000X1 +1.00000X2 +2.27000X3 ≤ +1800000
 (3) +1.00000X1 +1.00000X2 +2.27000X3 ≤ +843750
 (4) +1.00000X1 +1.00000X2 +2.27000X3 ≤ +1000000
 (5) +1.00000X1 +0 X2 +0 X3 ≤ +284839
 (6) +0 X1 +1.00000X2 +0 X3 ≤ +182677
 (7) +0 X1 +0 X2 +1.00000X3 ≤ +110837
 (8) +1.00000X1 +0 X2 +0 X3 ≤ +0
 (9) +0 X1 +1.00000X2 +0 X3 ≤ +0
 (10) +0 X1 +0 X2 +1.00000X3 ≤ +0

Summarized Results for MAX. TEGEL JAYA 1997						Page : 1	
Variable No.	Names	Solution	Opportunity Cost	Variable No.	Names	Solution	Opportunity Cost
1	X1	+255499.06	0	8	S5	+29339.949	0
2	X2	+182677.02	0	9	S6	0	+44.846745
3	X3	+110837.00	0	10	S7	0	+250.60927
4	S1	0	+1284.8315	11	S8	+255499.06	0
5	S2	+1110224.0	0	12	S9	+182677.02	0
6	S3	+153973.98	0	13	S10	+110837.00	0
7	S4	+310223.94	0				
Maximized OBJ. function = 5.105317E+07						Iters. = 3	



Sensitivity Analysis for Objective Coefficients' Page : 1

Variable	Min. C(j)	Original	Max. C(j)	Variable	Min. C(j)	Original	Max. C(j)
X1	0	+22.8700	+58.8282	X3	+36.3607	+286.970	+Infinity
X2	+28.5233	+73.3700	+Infinity				

Sensitivity Analysis for RHS Page : 1

Constrnt	Min. B(i)	Original	Max. B(i)	Constrnt	Min. B(i)	Original	Max. B(i)
1	+7192.12	+11740.0	+12262.3	6	+159152	+182677	+387537
2	+689776	+1800000	+Infinity	7	+92382.9	+110837	+271540
3	+689776	+843750	+Infinity	8	-Infinity	0	+255499
4	+689776	+1000000	+Infinity	9	-Infinity	0	+182677
5	+255499	+284839	+Infinity	10	-Infinity	0	+110837

PERUSAHAAN : TEGEL & BUIS BETON

"Jaya"

Jl. Dukun (Timur Perikanan) Muntilan. (melayani partai besar/kecil)
DIPROSES SECARA ELEKTRO MACHINAL DENGAN SISTIM GETAR

MUTU SII No : 1210/M/10/1983

SURAT KETERANGAN

Yang bertanda tangan di bawah ini menerangkan, bahwa :

Nama : Yulia Wiji Mawarti

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Fakultas : Ekonomi

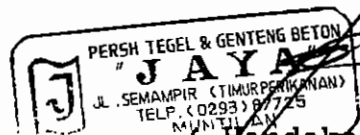
Jurusan : Manajemen

Universitas Katolik Soegijapranata Semarang, telah mengadakan penelitian di Perusahaan Tegel "JAYA" di Muntilan untuk keperluan skripsi dengan judul "PENENTUAN LUAS PRODUKSI OPTIMAL UNTUK MENCAPAI CONTRIBUTION MARGIN MAKSIMAL".

Demikian surat ini kami buat agar dapat dipergunakan seperlunya.

Muntilan, Maret 1997

Mengesahkan



(Hendoko Lukito)

Pimpinan

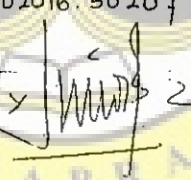


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