

LAMPIRAN

Lampiran A

Tabel A.1 Data Pengamatan dan Pengukuran awal

DATA WAKTU PENGAMATAN																	
No	Elemen Kerja	Perform Rating (%)	SIKLUS (sekon)										Rata-rata	St dev	UCL	LCL	N'
			1	2	3	4	5	6	7	8	9	10					
1	Memasang as dan karet as (2) bagian belakang	90	7.87	10.4	7.67	7.26	8.2	6.57	9.3	8.41	8.3	6.98	8.09	1.11	11.44	4.75	27.34
2	Merakit as dan karet belakang pada body bawah	95	4.84	4.19	4.78	4.97	4.31	4.47	4.31	4.48	4.2	5.37	4.59	0.39	5.75	3.43	10.22
3	Memasang gear pada bagian belakang	95	3.2	3.02	3.28	3.52	3.1	2.95	3.59	2.61	2.69	3.82	3.18	0.39	4.34	2.01	21.44
4	Memasang velg dan karet ban bagian belakang(2)	100	7.57	6.29	6.85	5.81	7.02	6.6	6.13	5.74	7.17	7.33	6.65	0.64	8.57	4.73	13.35
5	Memasang besi dan roda belakang(1)	100	2.05	1.76	1.84	2.09	2.17	2.24	2.12	1.9	2.12	1.91	2.02	0.16	2.49	1.55	8.75
6	Merakit besi dan roda(1) belakang pada body bawah	110	7.22	6.36	4.97	6.59	4.87	6.98	6.92	5.37	5.97	4.6	5.99	0.97	8.89	3.08	37.82
7	Memasang (1) roda belakang pada body bawah	100	2.19	2.45	2.27	2.25	2.33	2.59	2.46	1.99	1.92	2.02	2.25	0.22	2.91	1.58	13.92
8	Memasang as dan karet as (2) bagian depan	90	7.47	7.01	7.91	7.57	7.2	7.42	6.88	6.29	7.86	7.73	7.33	0.50	8.84	5.83	6.74
9	Merakit as dan karet depan pada body bawah	95	5.49	6.01	5.47	4.42	5.41	6.13	5.42	5.3	4.74	5.88	5.43	0.53	7.02	3.83	13.84
10	Memasang gear depan dan penghubung	100	3.43	4.73	3.07	4.41	3.05	3.66	3.48	3.77	3.06	3.47	3.61	0.57	5.32	1.91	35.53
11	Memasang velg dan karet ban bagian depan (2)	90	6.04	6.49	6.86	6.31	5.11	6.24	6.18	6.46	5.7	6.34	6.17	0.48	7.61	4.73	8.72
12	Memasang besi dan roda depan (1)	110	1.49	2.17	2.49	1.99	2.29	2.02	1.76	2.34	2.37	2.45	2.14	0.32	3.11	1.17	32.88
13	Merakit besi dan roda depan (1) pada body bawah	100	5.91	4.69	6.24	4.38	4.32	5.83	4.01	4.37	4.81	5.34	4.99	0.78	7.34	2.64	35.50
14	Memasang (1) roda depan pada body bawah	110	2.49	2.19	2.12	2.32	2.34	2.34	2.47	2.53	2.62	2.13	2.36	0.17	2.87	1.84	7.70
15	Memasang tombol on/off	100	3.46	3.52	2.31	3.59	4.66	3.09	2.33	4.44	2.47	2.45	3.23	0.86	5.81	0.66	101.67
16	Memasang plat baterai	90	2.99	2.57	2.43	2.36	2.22	2.41	2.34	2.51	2.14	3.44	2.54	0.39	3.71	1.37	34.15
17	Memasang penutup bagian depan	100	3.42	3.59	3.24	4.07	4.87	4.48	5.63	4.31	3.7	4.02	4.13	0.73	6.31	1.96	44.41
18	Memasang plat panjang pada rumah dinamo	110	3.58	4.01	3.13	2.93	3.87	2.88	3.64	2.64	3.64	3.52	3.38	0.46	4.76	2.01	26.47
19	Memasang plat pendek pada rumah dinamo	120	3.04	3.31	2.95	3.78	3.57	3.96	3.49	2.74	3.74	3.27	3.39	0.39	4.57	2.20	19.56
20	Memasang tabung pd rumah dinamo (jd)	110	4.46	3.69	3.77	3.95	3.11	3.17	3.1	3.69	3.04	3.6	3.56	0.46	4.93	2.19	23.74
21	Memasang gear kecil	120	2.97	3.36	3.49	3.97	2.48	3.59	3.62	2.23	3.02	3.99	3.27	0.59	5.05	1.50	47.05
22	Memasang gear besar	120	1.41	1.56	1.06	2.07	1.78	1.8	1.69	2.02	1.53	2.24	1.72	0.35	2.76	0.67	59.07
23	Memasang penutup dinamo	110	1.85	2.64	2.42	2.78	2.21	2.78	1.77	2.49	2.56	1.9	2.34	0.38	3.49	1.19	38.86
24	Merakit dinamo (jd) body bawah	100	3.94	4.58	4.29	3.45	3.06	3.14	3.62	3.01	4.21	3.3	3.66	0.56	5.35	1.97	34.07
25	Memasang baterai	100	3.09	4.56	4.34	3.34	3.13	3.95	4.22	3.31	3.13	3.32	3.64	0.57	5.34	1.94	34.95
26	Memasang pengunci baterai	110	3.32	2.34	2.17	2.58	2.47	3.09	3.69	2.4	2.73	2.92	2.77	0.48	4.21	1.33	43.41
27	Memasang body atas	100	2.9	2.57	2.73	2.43	1.97	2.15	2.36	2.45	2.08	2.21	2.39	0.29	3.27	1.50	21.84
28	Memasang pengunci body atas	100	2.1	2.95	2.62	2.54	2.7	2.73	1.91	1.78	3.13	2.63	2.51	0.44	3.83	1.19	44.50
29	Memasang sayap pada body bawah	100	2.29	2.58	2.68	2.7	1.99	2.66	2.27	2.59	2.87	2.41	2.50	0.26	3.29	1.72	15.68
30	Memasang mur untuk sayap pada body bawah	90	8.6	9.8	8.57	7.85	8.16	7.11	7.89	8.84	7.66	7.28	8.28	0.80	10.69	5.87	13.90
31	Memasang karet dan gotri (2)	95	6.83	5.56	4.95	5.55	5.7	5.58	5.1	5.96	5.38	5.75	5.64	0.52	7.18	4.09	12.03
32	Memasang mur pada gotri (jd)	95	5.31	5.02	5.59	6.08	5.2	5.52	5.03	5.39	6.06	4.66	5.39	0.45	6.74	4.04	10.06
33	Masukkan ring pada gotri	90	5.25	6.93	6.26	5.81	4.36	6.26	5.27	5.11	4.66	5.76	5.57	0.79	7.93	3.20	28.87
34	Merakit gotri pada body bwh	85	14.8	14	14.1	15.2	12.6	14.5	14.1	14.8	13.9	14.6	14.24	0.72	16.40	12.08	3.69

Lampiran B

Tabel B.1 Perhitungan Waktu Normal

No	Elemen Kerja	Waktu rata-rata (detik)	Performance rating (%)	Waktu normal (detik)
1	Memasang as dan karet as (2) bagian belakang	7.19	90%	6.47
2	Merakit as dan karet belakang pada <i>body</i> bawah	4.59	95%	4.36
3	Memasang gear pada bagian belakang	3.20	95%	3.04
4	Memasang velg dan karet ban bagian belakang(2)	6.66	95%	6.33
5	Memasang besi dan roda belakang(1)	2.02	100%	2.02
6	Merakit besi dan roda(1) belakang pada <i>body</i> bawah	5.77	90%	5.20
7	Memasang (1) roda belakang pada <i>body</i> bawah	2.29	110%	2.52
8	Memasang as dan karet as (2) bagian depan	7.33	90%	6.60
9	Merakit as dan karet depan pada <i>body</i> bawah	5.39	95%	5.12
10	Memasang gear depan dan penghubung	3.44	100%	3.44
11	Memasang velg dan karet ban bagian depan (2)	6.17	95%	5.86
12	Memasang besi dan roda depan (1)	2.28	100%	2.28
13	Merakit besi dan roda depan (1) pada <i>body</i> bawah	4.63	90%	4.17
14	Memasang (1) roda depan pada <i>body</i> bawah	2.36	110%	2.59
15	Memasang tombol <i>on / off</i>	3.10	100%	3.10
16	Memasang plat baterai	2.29	90%	2.06
17	Memasang penutup bagian depan	4.16	100%	4.16
18	Memasang plat panjang pada rumah dinamo	3.27	100%	3.27
19	Memasang plat pendek pada rumah dinamo	3.28	110%	3.61
20	Memasang tabung pd rumah dinamo (jd)	3.43	110%	3.77
21	Memasang gear kecil	3.33	120%	3.99
22	Memasang gear besar	1.74	120%	2.09
23	Memasang penutup dinamo	2.10	110%	2.30
24	Merakit dinamo (jd) <i>body</i> bawah	3.61	100%	3.61
25	Memasang baterai	3.44	100%	3.44
26	Memasang pengunci baterai	2.49	110%	2.74
27	Memasang <i>body</i> atas	2.31	100%	2.31
28	Memasang pengunci <i>body</i> atas	2.39	110%	2.63
29	Memasang sayap pada <i>body</i> bawah	2.44	100%	2.44
30	Memasang mur untuk sayap pada <i>body</i> bawah	7.95	90%	7.16
31	Memasang karet dan gotri (2)	5.61	95%	5.33
32	Memasang mur pada gotri (jd)	5.42	95%	5.15
33	Masukkan ring pada gotri	5.48	90%	4.93
34	Merakit gotri pada <i>body</i> bawah	14.24	85%	12.10

Lampiran C

Tabel C.1 Perhitungan Waktu Standar

No	Elemen Kerja	Waktu normal (detik)	allowance (%)	Waktu standard (detik/unit)
1	Memasang as dan karet as (2) bagian belakang	6.47	25%	8.63
2	Merakit as dan karet belakang pada <i>body</i> bawah	4.36	25%	5.81
3	Memasang gear pada bagian belakang	3.04	25%	4.06
4	Memasang velg dan karet ban bagian belakang(2)	6.33	25%	8.44
5	Memasang besi dan roda belakang(1)	2.02	25%	2.69
6	Merakit besi dan roda(1) belakang pada <i>body</i> bawah	5.20	25%	6.93
7	Memasang (1) roda belakang pada <i>body</i> bawah	2.52	25%	3.35
8	Memasang as dan karet as (2) bagian depan	6.60	25%	8.80
9	Merakit as dan karet depan pada <i>body</i> bawah	5.12	25%	6.83
10	Memasang gear depan dan penghubung	3.44	25%	4.59
11	Memasang velg dan karet ban bagian depan (2)	5.86	25%	7.82
12	Memasang besi dan roda depan (1)	2.28	25%	3.03
13	Merakit besi dan roda depan(1) pada <i>body</i> bawah	4.17	25%	5.56
14	Memasang (1) roda depan pada <i>body</i> bawah	2.59	25%	3.45
15	Memasang tombol <i>on /off</i>	3.10	25%	4.14
16	Memasang plat baterai	2.06	25%	2.75
17	Memasang penutup bagian depan	4.16	25%	5.55
18	Memasang plat panjang pada rumah dinamo	3.27	25%	4.36
19	Memasang plat pendek pada rumah dinamo	3.61	25%	4.81
20	Memasang tabung pd rumah dinamo (jd)	3.77	25%	5.03
21	Memasang gear kecil	3.99	25%	5.32
22	Memasang gear besar	2.09	25%	2.78
23	Memasang penutup dinamo	2.30	25%	3.07
24	Merakit dinamo (jd) <i>body</i> bawah	3.61	25%	4.81
25	Memasang baterai	3.44	25%	4.59
26	Memasang pengunci baterai	2.74	25%	3.65
27	Memasang <i>body</i> atas	2.31	25%	3.07
28	Memasang pengunci <i>body</i> atas	2.63	25%	3.51
29	Memasang sayap pada <i>body</i> bawah	2.44	25%	3.26
30	Memasang mur untuk sayap pada <i>body</i> bawah	7.16	25%	9.54
31	Memasang karet dan gotri (2)	5.33	25%	7.10
32	Memasang mur pada gotri (jd)	5.15	25%	6.87
33	Masukkan ring pada gotri	4.93	25%	6.57
34	Merakit gotri pada <i>body</i> bwh	12.10	25%	16.14

Lampiran D

Tabel D.1 Penambahan Data

No Elemen Kerja : 1		No Elemen Kerja : 2		No Elemen Kerja : 3	
No	Wkt (sekon)	No	Wkt (sekon)	No	Wkt (sekon)
1	7.87	1	4.84	1	3.20
2	10.35	2	4.19	2	3.02
3	7.67	3	4.78	3	3.28
4	7.26	4	4.97	4	3.52
5	8.20	5	4.31	5	3.10
6	6.57	6	4.47	6	2.95
7	9.30	7	4.31	7	3.59
8	8.41	8	4.48	8	2.61
9	8.30	9	4.20	9	2.69
10	6.98	10	5.37	10	3.82
11	6.34	11	4.56	11	3.31
12	6.30	rata-rata 4.59		12	3.16
13	6.31	st dev 0.37		13	2.57
14	6.83	UCL 5.69		14	3.14
15	6.66	LCL 3.49		15	3.37
16	5.95	N' 3.05		16	3.13
17	6.27			17	2.81
18	7.00			18	3.16
19	6.94			19	3.70
20	8.45			20	3.73
21	6.91			21	3.35
22	7.31			22	3.35
23	7.06			23	3.20
24	6.59			24	3.44
25	5.99			25	3.15
26	8.31			26	3.16
27	6.49			27	2.99
28	8.72			rata-rata 3.20	
29	6.28			st dev 0.32	
30	6.18			UCL 4.16	
31	7.40			LCL 2.25	
32	6.21			N' 3.91	
33	5.97				
rata-rata 7.19					
st dev 1.07					
UCL 10.39					
LCL 3.99					
N' 5.84					

No Elemen Kerja : 4	
No	Wkt (sekon)
1	7.57
2	6.29
3	6.85
4	5.81
5	7.02
6	6.60
7	6.13
8	5.74
9	7.17
10	7.33
11	6.76
12	6.50
13	6.07
14	6.63
15	7.45
rata-rata	6.66
st dev	0.58
UCL	8.40
LCL	4.92
N'	3.36

No Elemen Kerja : 6	
No	Wkt (sekon)
1	7.22
2	6.36
3	4.97
4	6.59
5	4.87
6	6.98
7	6.92
8	5.37
9	5.97
10	4.60
11	6.21
12	5.84
13	5.85
14	6.51
15	6.08
16	5.63
17	6.92
18	5.93
19	7.09
20	5.52
21	5.99
22	5.50
23	5.86
24	5.34
25	5.49
26	5.31
27	5.34
28	5.19
29	6.38
30	5.79
31	5.06
32	5.07
33	5.47
34	5.27
35	5.15
36	5.66
37	5.11
38	5.48
39	5.52
40	5.51
rata-rata	5.77
st dev	0.66
UCL	7.74
LCL	3.80
N'	19.12

No Elemen Kerja : 7	
No	Wkt (sekon)
1	2.19
2	2.45
3	2.27
4	2.25
5	2.33
6	2.59
7	2.46
8	1.99
9	1.92
10	2.02
11	2.41
12	2.64
13	2.33
14	2.22
15	2.23
rata-rata	2.29
st dev	0.21
UCL	2.91
LCL	1.66
N'	3.51

No Elemen Kerja : 9	
No	Wkt (sekon)
1	5.49
2	6.01
3	5.47
4	4.42
5	5.41
6	6.13
7	5.42
8	5.30
9	5.74
10	5.88
11	4.78
12	5.44
13	5.58
14	5.24
15	4.52
rata-rata	5.39
st dev	0.50
UCL	6.88
LCL	3.90
N'	3.56

No Elemen Kerja : 10	
No	Wkt (sekon)
1	3.43
2	4.73
3	3.07
4	4.41
5	3.05
6	3.66
7	3.48
8	3.77
9	3.06
10	3.47
11	3.88
12	3.34
13	3.18
14	3.29
15	3.67
16	3.38
17	3.49
18	3.15
19	3.25
20	2.84
21	3.29
22	3.04
23	3.24
24	4.41
25	3.45
26	3.06
27	3.01
28	3.06
29	4.04
30	3.77
31	3.31
32	3.41
33	3.07
34	3.47
35	3.31
rata-rata	3.44
st dev	0.43
UCL	4.74
LCL	2.15
N'	4.93

No Elemen Kerja : 12	
No	Wkt (sekon)
1	1.49
2	2.17
3	2.49
4	1.99
5	2.29
6	2.02
7	1.76
8	2.34
9	2.37
10	2.45
11	2.42
12	2.73
13	2.32
14	2.54
15	2.70
16	2.66
17	2.09
18	2.24
19	2.38
20	2.56
21	2.61
22	2.51
23	2.77
24	2.15
25	2.77
26	2.15
27	2.35
28	2.17
29	2.09
30	2.01
31	2.12
32	1.70
33	1.91
34	2.25
35	2.08
36	2.16
37	2.34
38	2.31
rata-rata	2.28
st dev	0.30
UCL	3.16
LCL	1.39
N'	5.13

No Elemen Kerja : 13	
No	Wkt (sekon)
1	5.91
2	4.69
3	6.24
4	4.38
5	4.32
6	5.83
7	4.01
8	4.37
9	4.81
10	5.34
11	4.51
12	5.52
13	5.21
14	4.46
15	4.45
16	4.91
17	4.64
18	4.41
19	4.13
20	4.21
21	4.02
22	4.31
23	4.41
24	4.08
25	4.24
26	4.23
27	4.31
28	4.03
29	4.84
30	4.38
31	4.16
32	4.81
33	4.85
34	4.16
35	4.81
36	4.85
rata-rata	4.63
st dev	0.56
UCL	6.31
LCL	2.96
N'	4.75

No Elemen Kerja : 16	
No	Wkt (sekon)
1	2.99
2	2.57
3	2.43
4	2.36
5	2.22
6	2.41
7	2.34
8	2.51
9	2.14
10	3.44
11	1.84
12	1.74
13	2.49
14	1.84
15	1.98
16	2.61
17	1.95
18	2.59
19	2.00
20	2.52
21	2.13
22	2.68
23	2.61
24	2.08
25	2.11
26	2.16
27	2.22
28	2.28
29	2.06
30	2.10
31	2.29
32	2.17
33	2.11
34	1.98
35	2.15
rata-rata	2.29
st dev	0.34
UCL	3.31
LCL	1.27
N'	5.85

No Elemen Kerja : 17	
No	Wkt (sekon)
1	3.42
2	3.59
3	3.24
4	4.07
5	4.87
6	4.48
7	5.63
8	4.31
9	3.70
10	4.02
11	3.32
12	4.06
13	5.29
14	3.51
15	3.75
16	4.74
17	4.02
18	4.28
19	4.27
20	3.54
21	3.95
22	3.59
23	3.20
24	4.41
25	4.69
26	3.77
27	4.40
28	3.40
29	4.24
30	3.63
31	3.66
32	3.71
33	5.14
34	4.56
35	3.75
36	5.69
37	3.91
38	3.32
39	3.34
40	4.98
41	4.68
42	3.71
43	4.35
44	5.28
45	4.71
46	4.27
47	5.50
48	3.75
49	4.13
rata-rata	4.16
st dev	0.66
UCL	6.15
LCL	2.17
N'	6.30

No Elemen Kerja : 15		No Elemen Kerja : 15	
No	Wkt (sekon)	No	Wkt (sekon)
1	3.46	57	2.83
2	3.52	58	3.02
3	2.31	59	2.75
4	3.59	60	2.68
5	4.66	61	2.93
6	3.09	62	3.37
7	2.33	63	3.66
8	4.44	64	2.97
9	2.47	65	3.86
10	2.45	66	2.93
11	3.36	67	2.60
12	2.79	68	2.70
13	2.97	69	2.66
14	2.49	70	3.87
15	3.10	71	2.74
16	2.95	72	2.45
17	3.23	73	2.62
18	3.73	74	3.60
19	3.90	75	3.55
20	2.80	76	2.61
21	3.00	77	2.87
22	4.23	78	3.20
23	2.87	79	3.46
24	3.24	80	3.49
25	3.33	81	3.02
26	2.74	82	3.34
27	3.48	83	3.42
28	2.19	84	3.02
29	2.55	85	2.95
30	3.48	86	3.48
31	3.43	87	3.09
32	2.41	88	3.46
33	3.35	89	2.83
34	2.34	90	3.30
35	3.45	91	2.94
36	3.65	92	3.02
37	3.22	93	2.56
38	2.27	94	2.84
39	3.72	95	3.37
40	2.77	96	3.41
41	3.45	97	3.09
42	2.61	98	3.13
43	3.21	99	3.88
44	4.11	100	3.44
45	3.01	101	3.54
46	2.77	102	3.16
47	2.76	103	3.63
48	2.24	104	2.95
49	2.59	105	2.91
50	2.47	106	2.91
51	3.26	107	2.73
52	2.31	rata-rata	3.09
53	3.59	st dev	0.59
54	2.43	UCL	4.86
55	3.48	LCL	1.33
56	3.54	N'	6.36

No Elemen Kerja : 18	
No	Wkt (sekon)
1	3.58
2	4.01
3	3.13
4	2.93
5	3.87
6	2.88
7	3.64
8	2.64
9	3.64
10	3.52
11	3.21
12	3.03
13	3.43
14	2.70
15	2.98
16	3.22
17	3.60
18	2.67
19	3.42
20	2.74
21	3.06
22	3.77
23	3.76
24	3.56
25	3.09
26	3.09
27	3.06
rata-rata	3.27
st dev	0.39
UCL	4.45
LCL	2.09
N'	4.72

No Elemen Kerja : 19	
No	Wkt (sekon)
1	3.04
2	3.31
3	2.95
4	3.78
5	3.57
6	3.96
7	3.49
8	2.74
9	3.74
10	3.27
11	2.65
12	3.50
13	2.96
14	3.27
15	3.77
16	3.29
17	3.42
18	2.84
19	2.99
20	3.06
rata-rata	3.28
st dev	0.37
UCL	4.40
LCL	2.16
N'	4.44

No Elemen Kerja : 20	
No	Wkt (sekon)
1	4.46
2	3.69
3	3.77
4	3.95
5	3.11
6	3.17
7	3.10
8	3.69
9	3.04
10	3.60
11	3.52
12	3.42
13	3.29
14	3.31
15	3.45
16	3.24
17	2.91
18	3.02
19	2.98
20	3.64
21	2.94
22	3.56
23	3.81
24	3.65
rata-rata	3.43
st dev	0.38
UCL	4.56
LCL	2.30
N'	4.29

No Elemen Kerja : 21	
No	Wkt (sekon)
1	2.97
2	3.36
3	3.49
4	3.97
5	2.48
6	3.59
7	3.62
8	2.23
9	3.02
10	3.99
11	3.32
12	3.34
13	3.13
14	2.99
15	3.36
16	3.66
17	3.04
18	2.96
19	3.13
20	3.22
21	3.43
22	3.76
23	3.84
24	3.01
25	3.25
26	3.21
27	3.34
28	3.25
29	3.21
30	3.52
31	3.14
32	3.27
33	3.46
34	3.49
35	3.01
36	3.57
37	3.74
38	3.34
39	3.44
40	3.88
41	3.38
42	3.22
43	3.34
44	3.43
45	3.09
46	3.27
47	3.73
48	3.15
rata-rata	3.33
st dev	0.34
UCL	4.34
LCL	2.31
N'	4.02

No Elemen Kerja : 23	
No	Wkt (sekon)
1	1.85
2	2.64
3	2.42
4	2.78
5	2.21
6	2.78
7	1.77
8	2.49
9	2.56
10	1.90
11	2.25
12	2.51
13	2.34
14	1.87
15	1.89
16	2.11
17	2.20
18	2.14
19	2.04
20	1.72
21	1.87
22	1.71
23	2.07
24	2.27
25	2.11
26	2.43
27	1.93
28	1.79
29	1.73
30	1.66
31	2.20
32	2.16
33	1.56
34	1.64
35	2.53
36	1.52
37	2.15
38	1.85
39	1.91
40	2.24
rata-rata	2.10
st dev	0.33
UCL	3.09
LCL	1.10
N'	6.31

No Elemen Kerja : 22		No Elemen Kerja : 22	
No	Wkt (sekon)	No	Wkt (sekon)
1	1.41	34	1.41
2	1.56	35	1.56
3	1.06	36	1.98
4	2.07	37	1.64
5	1.78	38	1.95
6	1.80	39	2.04
7	1.69	40	2.03
8	2.02	41	2.12
9	1.53	42	1.42
10	2.24	43	2.14
11	1.91	44	1.60
12	1.61	45	2.02
13	1.58	46	1.89
14	1.78	47	1.77
15	1.59	48	1.38
16	2.02	49	1.74
17	1.13	50	2.22
18	2.22	51	1.38
19	1.95	52	1.99
20	1.13	53	1.63
21	1.87	54	1.29
22	1.96	55	1.62
23	1.81	56	2.02
24	1.88	57	1.85
25	1.95	58	1.50
26	1.90	59	1.81
27	1.41	60	1.59
28	1.87	rata-rata	1.72
29	2.01	st dev	0.33
30	2.13	UCL	2.71
31	1.24	LCL	0.73
32	1.13	N'	6.89
33	1.51		

No Elemen Kerja : 21	
No	Wkt (sekon)
1	3.94
2	4.58
3	4.92
4	3.45
5	3.06
6	3.14
7	3.62
8	3.01
9	4.21
10	3.30
11	3.49
12	3.38
13	3.28
14	3.80
15	3.76
16	3.35
17	3.45
18	3.49
19	3.35
20	3.29
21	3.34
22	3.38
23	3.47
24	3.34
25	3.36
26	3.48
27	3.41
28	3.34
29	4.37
30	3.55
31	3.48
32	3.42
33	3.63
34	4.56
35	4.23
rata-rata	3.61
st dev	0.45
UCL	4.97
LCL	2.25
N'	4.95

No Elemen Kerja : 25	
No	Wkt (sekon)
1	3.09
2	4.56
3	4.34
4	3.34
5	3.13
6	3.95
7	4.22
8	3.31
9	3.13
10	3.32
11	3.16
12	3.20
13	3.36
14	3.30
15	3.46
16	3.96
17	3.56
18	3.45
19	3.14
20	3.14
21	3.76
22	2.94
23	3.02
24	4.16
25	3.35
26	3.47
27	3.48
28	3.01
29	2.66
30	4.31
31	2.68
32	2.46
33	3.10
34	3.48
35	3.93
36	3.87
37	3.70
38	3.59
39	3.55
40	3.11
rata-rata	3.44
st dev	0.48
UCL	4.87
LCL	2.02
N'	5.45

No Elemen Kerja : 26	
No	Wkt (sekon)
1	3.32
2	2.34
3	2.17
4	2.58
5	2.47
6	3.09
7	3.69
8	2.40
9	2.73
10	2.92
11	2.46
12	1.78
13	2.07
14	2.44
15	2.74
16	2.49
17	2.41
18	3.11
19	2.52
20	2.84
21	2.46
22	2.33
23	2.20
24	2.74
25	2.78
26	2.36
27	2.21
28	2.38
29	2.39
30	2.88
31	2.41
32	2.45
33	2.12
34	2.72
35	2.29
36	2.31
37	2.34
38	2.38
39	3.11
40	2.45
41	1.89
42	2.06
43	2.09
44	1.99
45	2.25
46	2.32
47	2.66
48	2.91
49	2.00
rata-rata	2.49
st dev	0.38
UCL	3.62
LCL	1.36
N'	5.99

No Elemen Kerja : 27	
No	Wkt (sekon)
1	2.90
2	2.57
3	2.73
4	2.43
5	1.97
6	2.15
7	2.36
8	2.45
9	2.08
10	2.21
11	1.89
12	2.11
13	2.05
14	1.84
15	2.16
16	2.14
17	2.60
18	2.46
19	2.66
20	2.33
21	2.34
22	2.42
23	2.34
24	2.14
rata-rata	2.31
st dev	0.27
UCL	3.11
LCL	1.50
N'	4.56

No Elemen Kerja : 28	
No	Wkt (sekon)
1	2.10
2	2.95
3	2.62
4	2.54
5	2.70
6	2.73
7	1.91
8	1.78
9	3.13
10	2.63
11	1.99
12	3.34
13	3.42
14	2.22
15	2.23
16	2.35
17	1.68
18	2.76
19	2.09
20	2.81
21	2.34
22	2.35
23	2.78
24	2.22
25	2.24
26	2.11
27	2.07
28	2.50
29	1.94
30	2.21
31	2.81
32	2.05
33	2.15
34	1.95
35	1.86
36	2.12
37	2.52
38	2.49
39	2.31
40	2.42
41	2.41
42	2.63
43	2.40
44	2.39
45	2.38
rata-rata	2.39
st dev	0.39
UCL	3.55
LCL	1.23
N'	6.41

No Elemen Kerja : 29	
No	Wkt (sekon)
1	2.29
2	2.58
3	2.68
4	2.70
5	1.99
6	2.66
7	2.27
8	2.59
9	2.87
10	2.41
11	2.34
12	2.59
13	2.48
14	2.30
15	2.21
16	2.12
rata-rata	2.44
st dev	0.24
UCL	3.16
LCL	1.72
N'	3.81

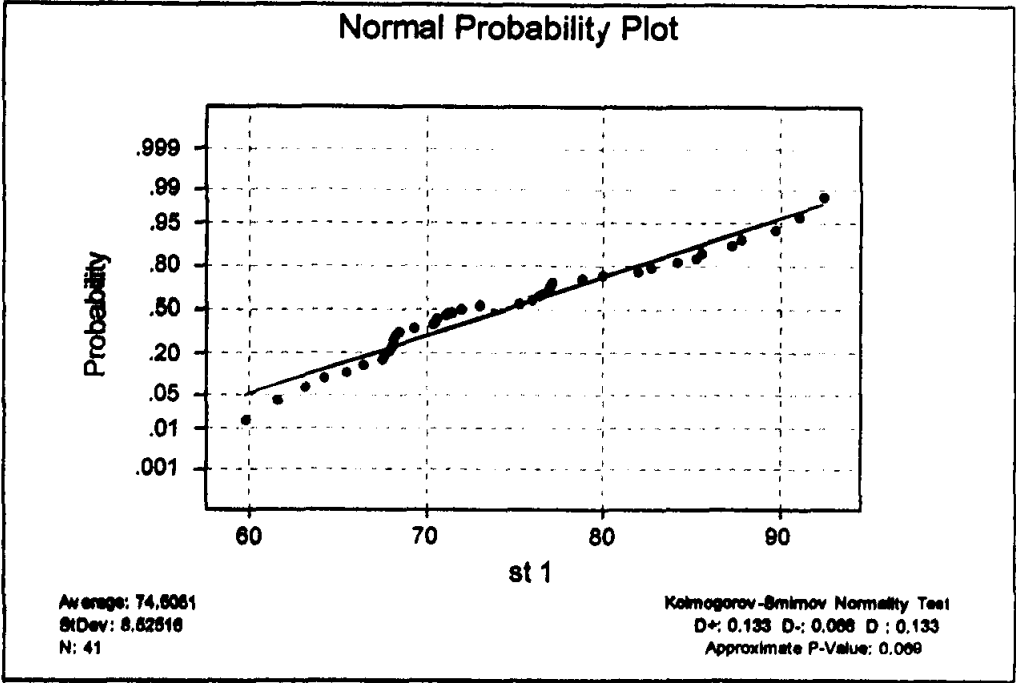
No Elemen Kerja : 30	
No	Wkt (sekon)
1	8.60
2	9.80
3	8.57
4	7.85
5	8.16
6	7.11
7	7.89
8	8.84
9	7.66
10	7.28
11	7.63
12	7.23
13	6.89
14	8.24
15	7.56
rata-rata	7.95
st dev	0.77
UCL	10.26
LCL	5.64
N'	3.74

No Elemen Kerja : 31	
No	Wkt (sekon)
1	6.83
2	5.56
3	4.95
4	5.55
5	5.70
6	5.58
7	5.10
8	5.96
9	5.38
10	5.75
11	5.55
12	5.57
13	5.41
rata-rata	5.61
st dev	0.45
UCL	6.96
LCL	4.25
N'	3.09

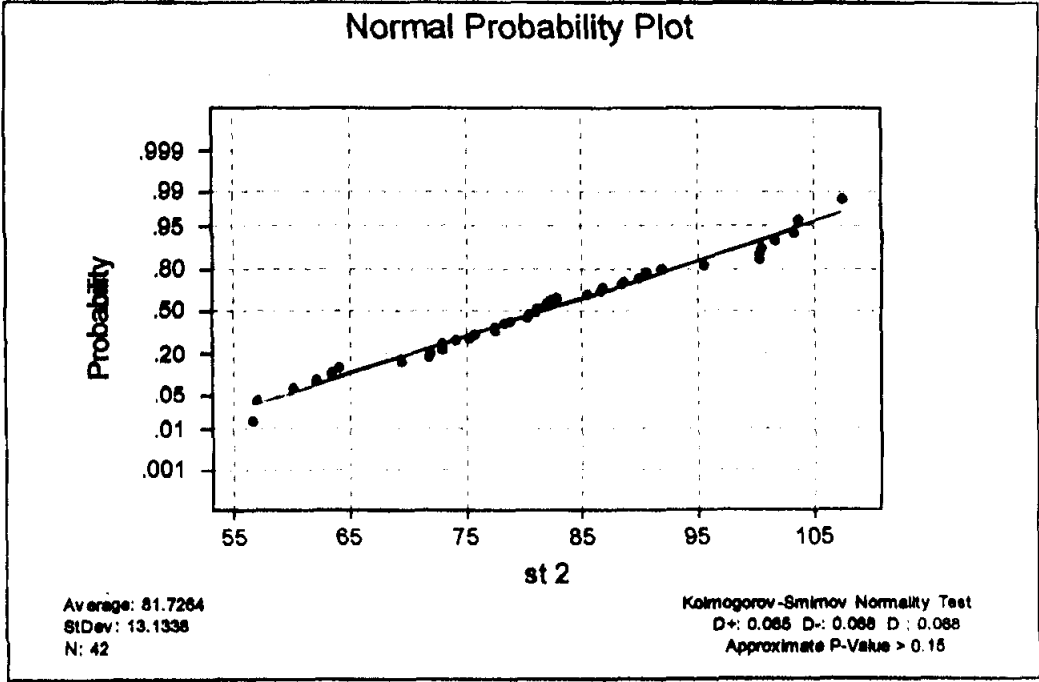
No Elemen Kerja : 32	
No	Wkt (sekon)
1	5.31
2	5.02
3	5.59
4	6.08
5	5.20
6	5.52
7	5.03
8	5.39
9	6.06
10	4.66
11	5.79
rata-rata	5.42
st dev	0.44
UCL	6.75
LCL	4.09
N'	3.12

No Elemen Kerja : 33	
No	Wkt (sekon)
1	5.25
2	6.93
3	6.26
4	5.81
5	4.36
6	6.26
7	5.27
8	5.11
9	4.66
10	5.76
11	6.27
12	4.91
13	6.04
14	4.44
15	5.08
16	4.67
17	4.65
18	4.83
19	4.87
20	5.38
21	6.10
22	6.23
23	5.81
24	5.02
25	5.44
26	5.79
27	6.07
28	4.98
29	5.95
30	6.05
rata-rata	5.48
st dev	0.67
UCL	7.47
LCL	3.48
N'	4.78

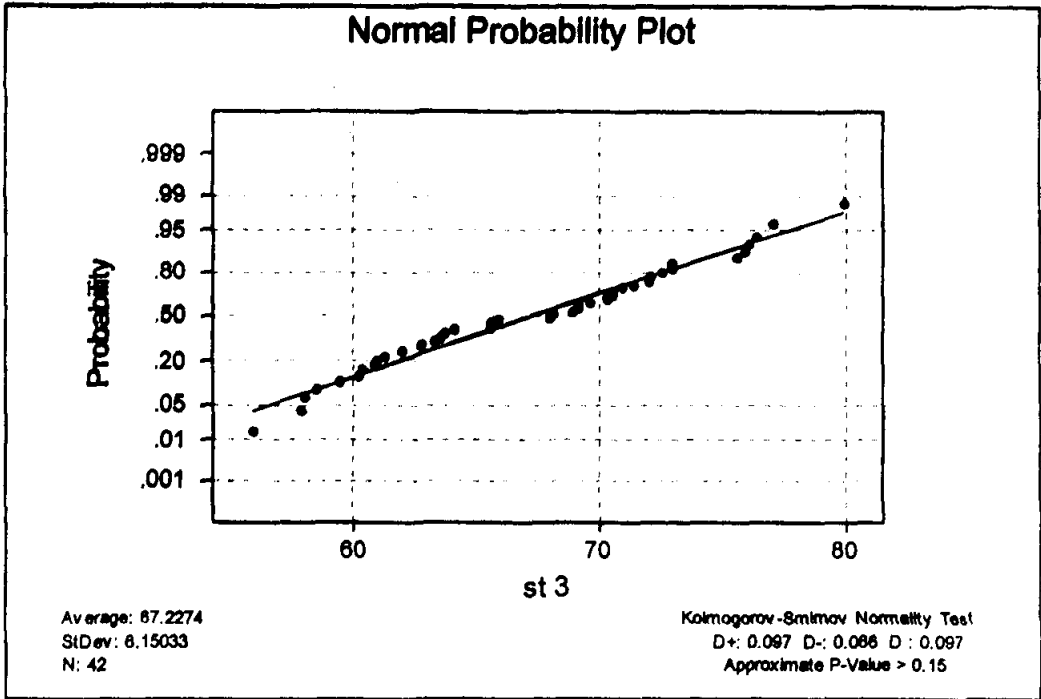
Lampiran E



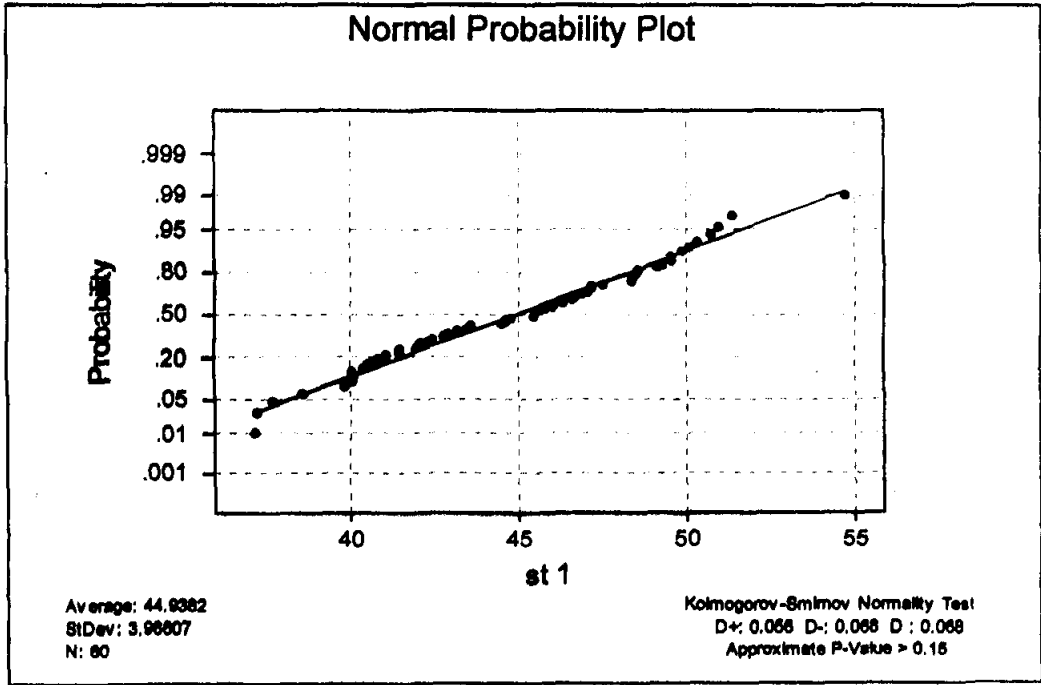
Gambar E.1 *Normality test waktu simulasi manual stasiun 1 pada production rate 50*



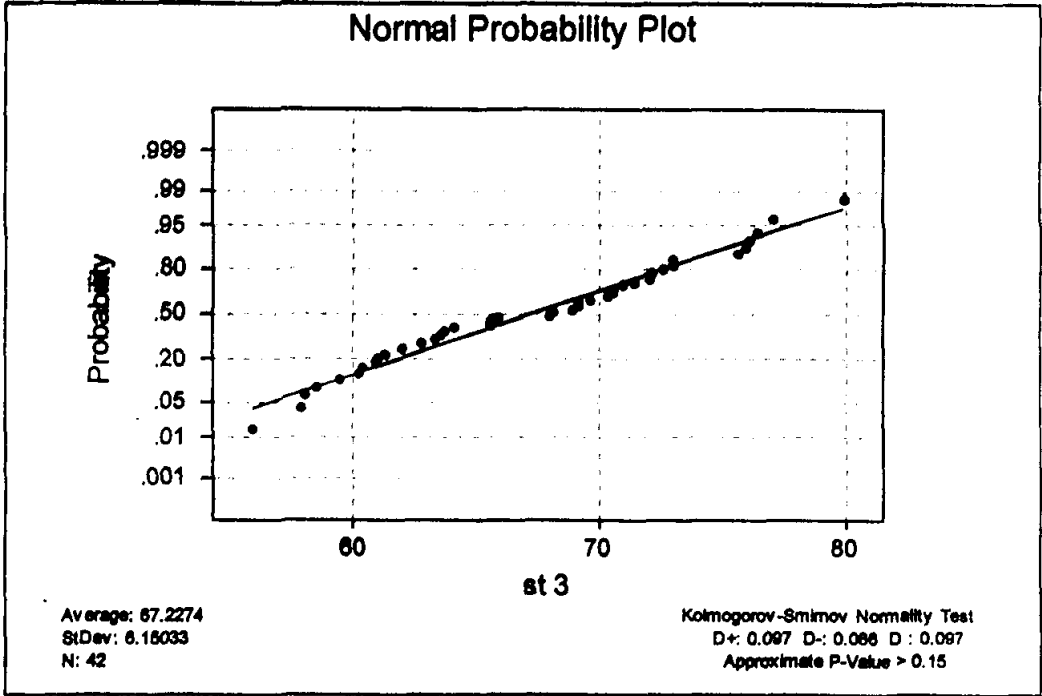
Gambar E.2 *Normality test waktu simulasi manual stasiun 2 pada production rate 50*



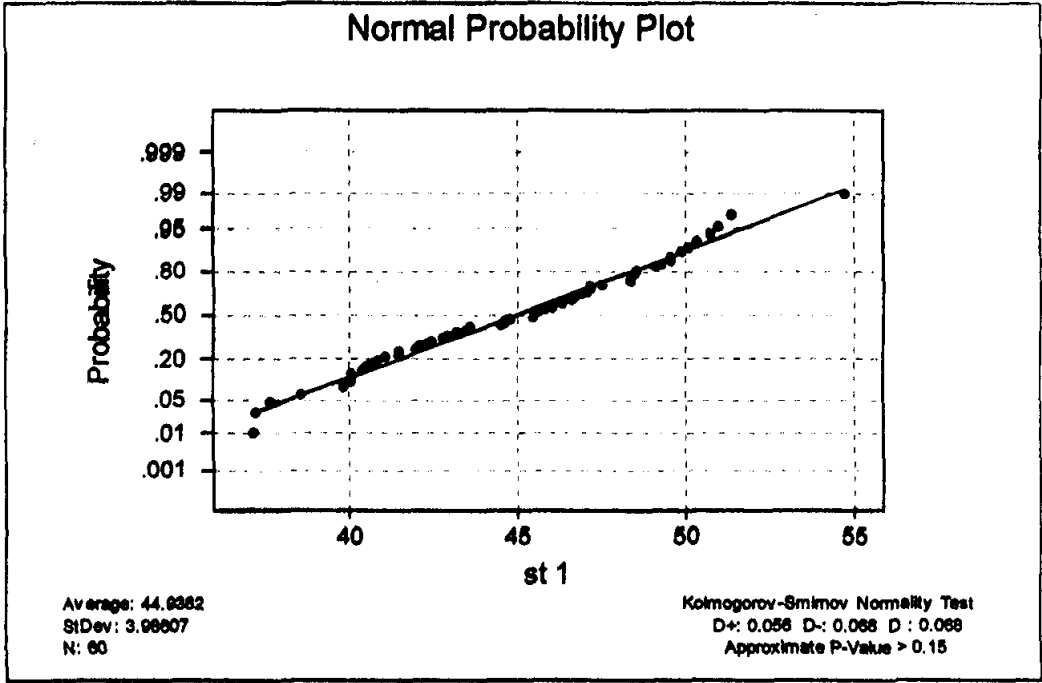
Gambar E.3 *Normality test waktu simulasi manual stasiun 3 pada production rate 50*



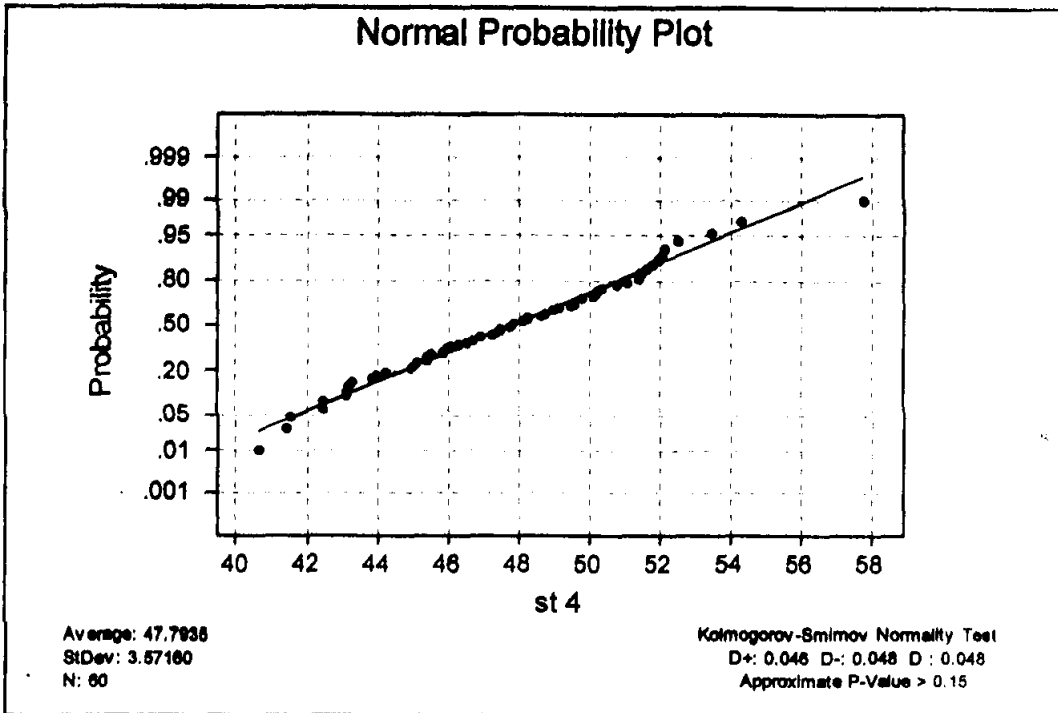
Gambar E.4 *Normality test waktu simulasi manual stasiun 1 pada production rate 70*



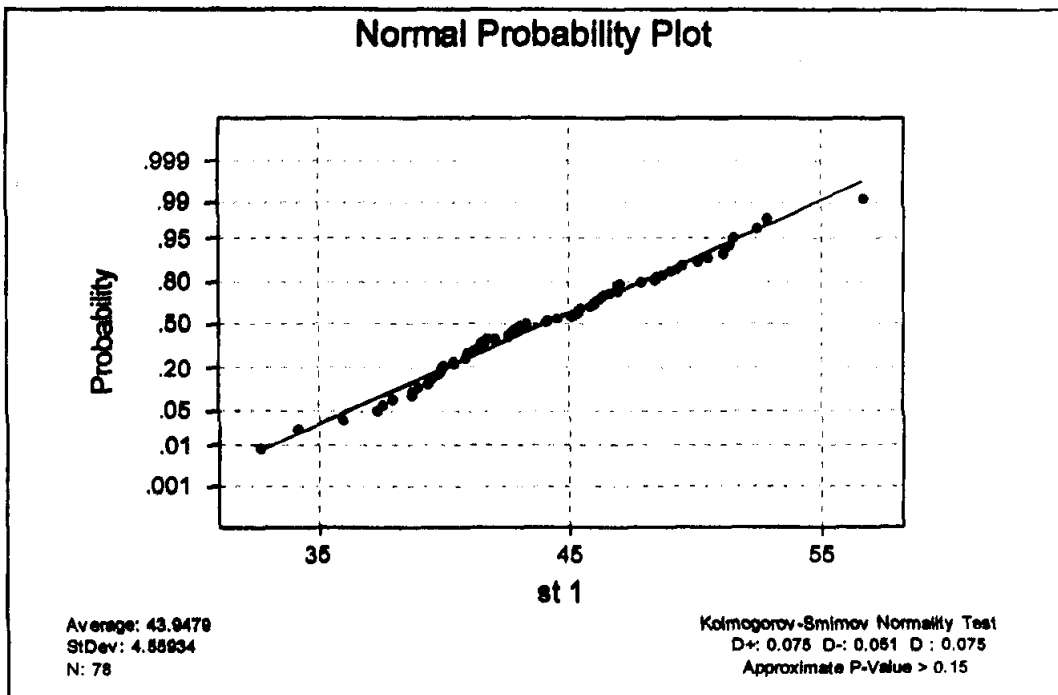
Gambar E.3 *Normality test* waktu simulasi manual stasiun 3 pada *production rate* 50



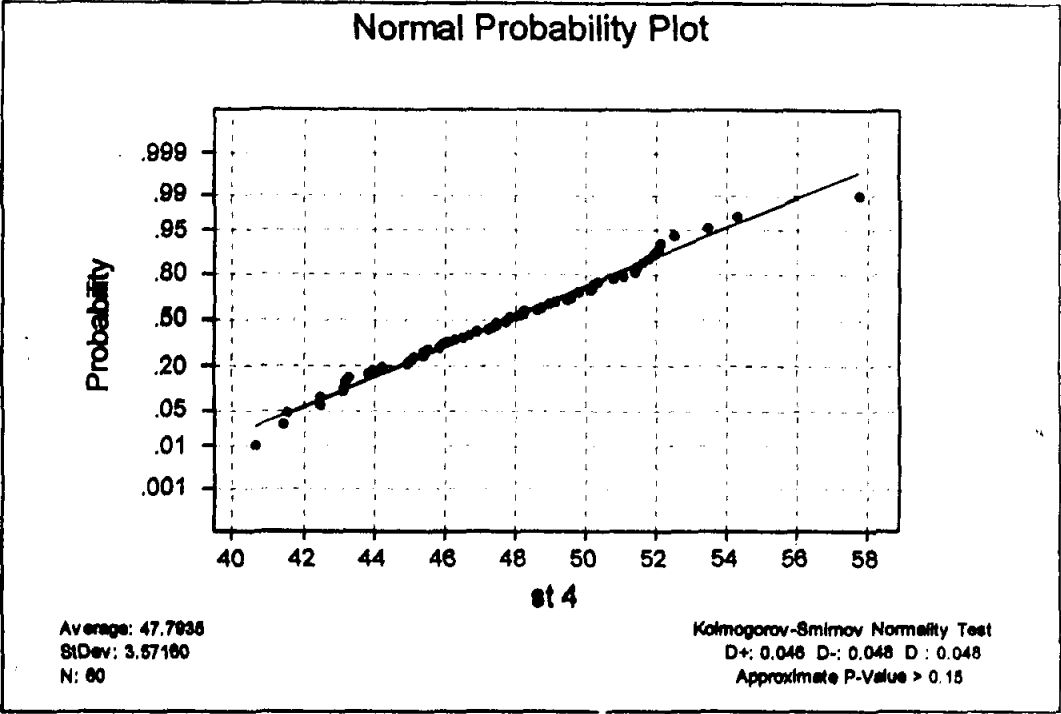
Gambar E.4 *Normality test* waktu simulasi manual stasiun 1 pada *production rate* 70



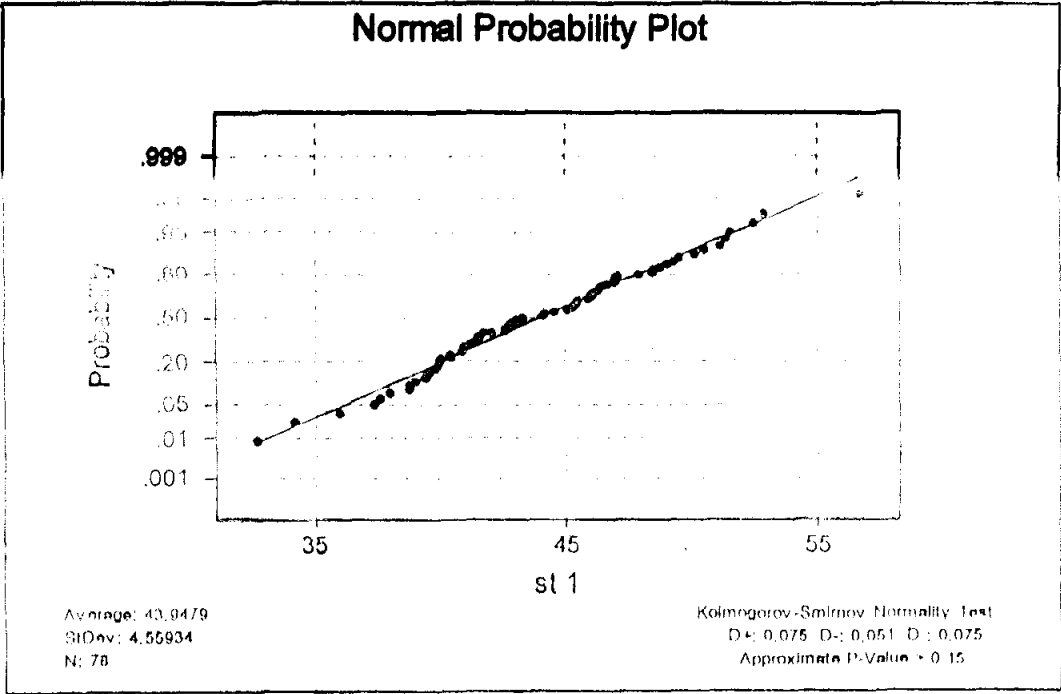
Gambar E.7 Normality test waktu simulasi manual stasiun 4 pada *production rate* 70



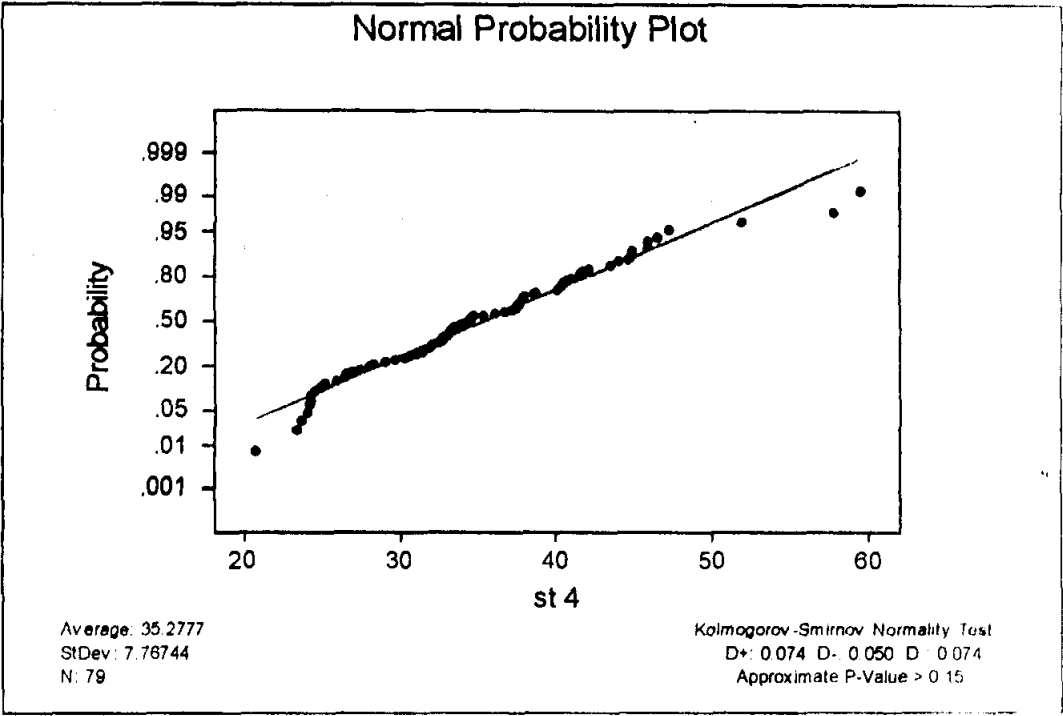
Gambar E.8 Normality test waktu simulasi manual stasiun 1 pada *production rate* 86



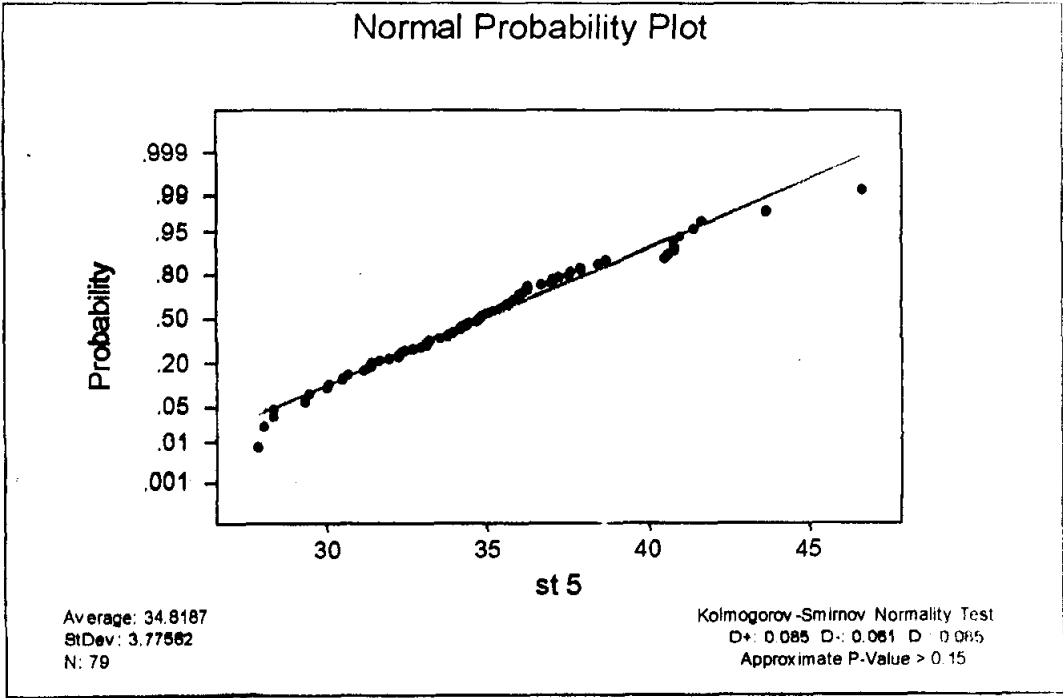
Gambar E.7 *Normality test waktu simulasi manual stasiun 4 pada production rate 70*



Gambar E.8 *Normality test waktu simulasi manual stasiun 1 pada production rate 86*

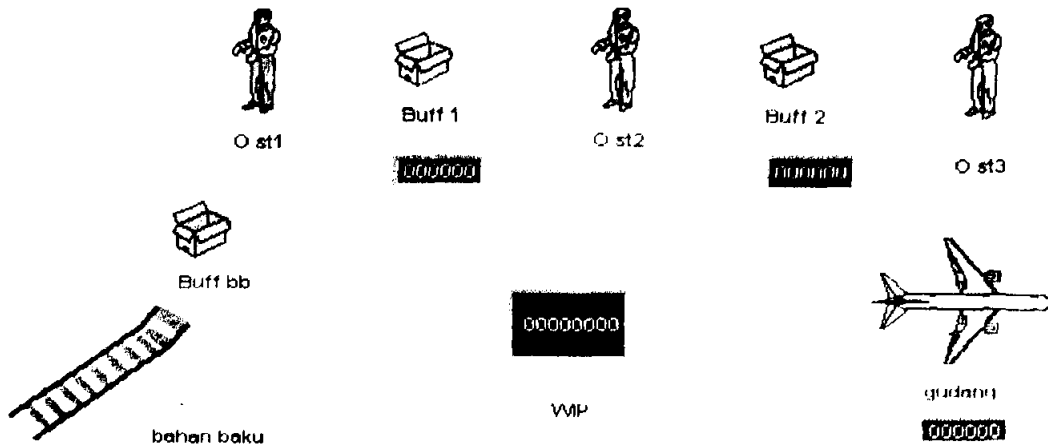


Gambar E.11 *Normality test* waktu simulasi manual stasiun 4 pada *production rate* 86



Gambar E.12 *Normality test* waktu simulasi manual stasiun 5 pada *production rate* 86

Lampiran F



Gambar F.1 layout untuk Production rate 50

```

*****
*
*           Formatted Listing of Model:
*           A:\ST3 TIDAK NORMAL.2.1f(baru).MOD
*
*****
Time Units:           Seconds
Distance Units:       Meters

*****
*
*           Locations
*
*****

Name      Cap      Units  Stats      Rules      Cost
-----
bahan_baku  inf      1      Time Series Oldest, FIFO,
Buff_bb    inf      1      Time Series Oldest, ,
O_st1      1        1      Time Series Oldest, ,
Buff_1     1        1      Time Series Oldest, ,
O_st2      1        1      Time Series Oldest, ,
Buff_2     1        1      Time Series Oldest, ,
O_st3      1        1      Time Series Oldest, ,
gudang     inf      1      Time Series Oldest, ,

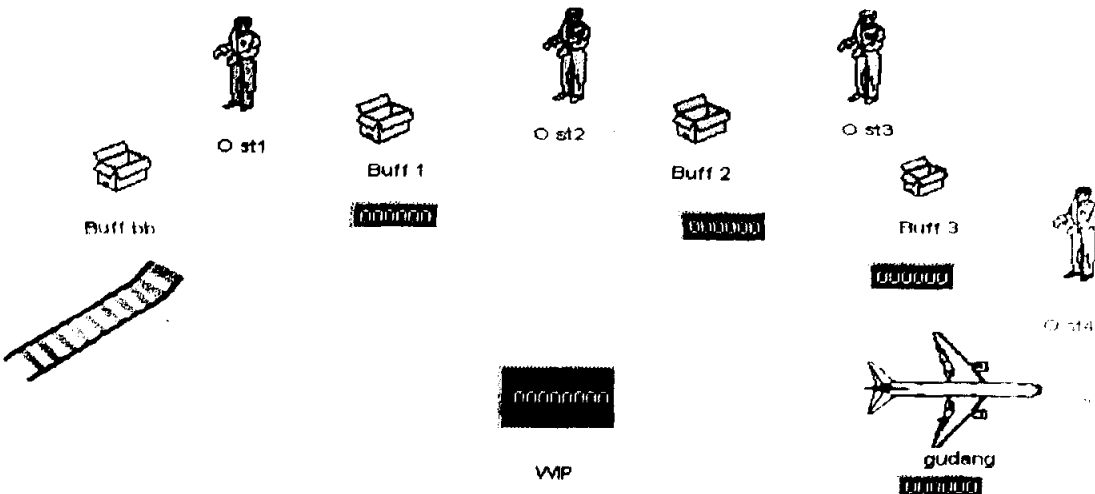
*****
*
*           Entities
*
*****

Name      Speed (mpm)  Stats
-----
car1      150          Time Series
car2      150          Time Series
car3      150          Time Series
car4      150          Time Series

*****
*
*           Variables (global)
*
*****

ID      Type      Initial value  Stats
-----
jadi    Integer     0             Time Series
WIP     Integer     0             Time Series

```



Gambar F.3 layout untuk Production rate 70

```
*****
*
*           Formatted Listing of Model:
*           A:\ST4 TIDAK NORMAL.1r(baru).MOD
*
*****
Time Units:           Seconds
Distance Units:       Meters

*****
*                               Locations
*
*****

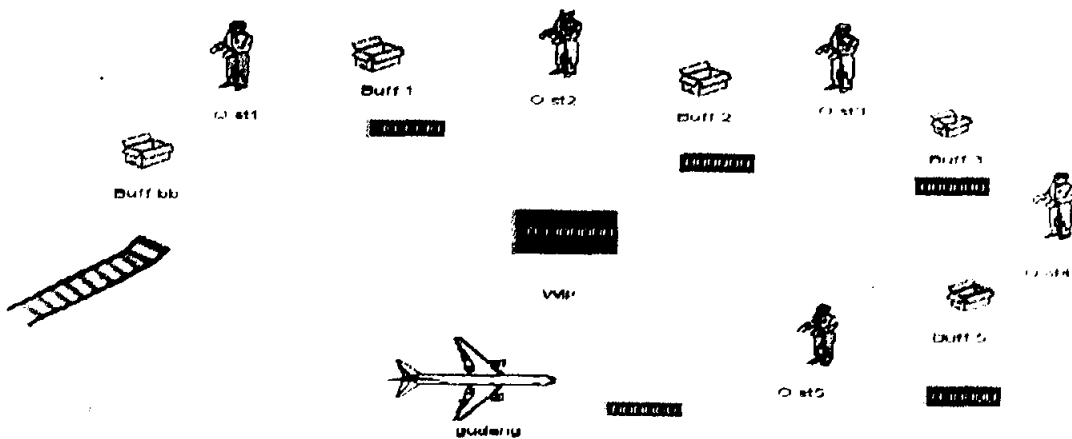
Name      Cap Units Stats      Rules      Cost
-----
bahan_baku inf 1      Time Series Oldest, FIFO,
Buff_bb   inf 1      Time Series Oldest, ,
O_st1     1 1      Time Series Oldest, ,
Buff_1    2 1      Time Series Oldest, ,
O_st2     1 1      Time Series Oldest, ,
Buff_2    1 1      Time Series Oldest, ,
O_st3     1 1      Time Series Oldest, ,
gudang    inf 1      Time Series Oldest, ,
O_st4     1 1      Time Series Oldest, ,
Buff_3    1 1      Time Series Oldest, ,

*****
*                               Entities
*
*****

Name      Speed (mpm) Stats      Cost
-----
car1      150      Time Series
car2      150      Time Series
car3      150      Time Series
car4      150      Time Series
car5      150      Time Series

*****
*                               Variables (global)
*
*****

ID      Type      Initial value Stats
-----
jadi    Integer    0      Time Series
wip     Integer    0      Time Series
```



Gambar F.5 layout untuk Production rate 86

```

*****
*
*           Formatted Listing of Model:
*           A:\ST4 TIDAK NORMAL.1r(baru).MOD
*
*****
Time Units:                      Seconds
Distance Units:                  Meters

*****
*
*           Locations
*
*****
Name      Cap Units  Stats      Rules      Cost
-----
bahan_baku  inf 1      Time Series Oldest, FIFO,
Buff_bb     inf 1      Time Series Oldest,
O_st1       1 1      Time Series Oldest,
Buff_1      2 1      Time Series Oldest,
O_st2       1 1      Time Series Oldest,
Buff_2      1 1      Time Series Oldest,
O_st3       1 1      Time Series Oldest,
Buff_3      1 1      Time Series Oldest,
O_st4       1 1      Time Series Oldest,
Buff_4      1 1      Time Series Oldest,
O_st5       1 1      Time Series Oldest,
gudang      inf 1      Time Series Oldest,

*****
*
*           Entities
*
*****
Name      Speed (mpm)  Stats      Cost
-----
car1      150          Time Series
car2      150          Time Series
car3      150          Time Series
car4      150          Time Series
car5      150          Time Series
car6      150          Time Series

*****
*
*           Variables (global)
*
*****
ID      Type      Initial value  Stats
-----
jadi    Integer    0              Time Series
wip     Integer    0              Time Series

```

Lampiran G

General Report

Output from A:\ST3 TIDAK NORMAL.2.1r(baru).1.MOD

Date: May/28/2005 Time: 04:36:25 AM

Scenario : Normal Run
 Replication : Average
 Period : Final Report (0 sec to 1 hr Elapsed: 1 hr)
 Simulation Time : 1 hr

LOCATIONS

Location Name	Scheduled Hours	Capacity	Total Entries	Average Seconds Per Entry	Average Contents	Maximum Contents	Current Contents	% Util	
bahan baku	1	999999	51.68	155.959509	2.23867	5.96	2.36	0.00	(Average)
bahan baku	0	0	4.82602	2.278448	0.208942	1.13636	1.20202	0.00	(Std. Dev.)
Buff bb	1	999999	49.32	235.756772	3.36183	8.56	7.07	0.00	(Average)
Buff bb	0	0	4.67073	127.980967	2.02883	3.70999	4.12005	0.00	(Std. Dev.)
O st1	1	1	42.25	77.545151	0.910198	1	1	86.45	(Average)
O st1	0	0	1.45904	2.451831	0.0445827	0	0	3.43	(Std. Dev.)
Buff 1	1	1	42.25	49.085564	0.57794	1	0.82	57.79	(Average)
Buff 1	0	0	1.45904	14.095069	0.171632	0	0.386123	17.16	(Std. Dev.)
O st2	1	1	41.43	80.716462	0.928498	1	1	92.85	(Average)
O st2	0	0	1.49919	2.013807	0.02979	0	0	2.98	(Std. Dev.)
Buff 2	1	1	41.43	1.516199	0.0175951	1	0.03	1.76	(Average)
Buff 2	0	0	1.49919	0.939890	0.0111911	0	0.171447	1.12	(Std. Dev.)
O st3	1	1	41.4	66.536043	0.765173	1	0.81	76.52	(Average)
O st3	0	0	1.48392	1.094881	0.0304144	0	0.394277	3.04	(Std. Dev.)
gudang	1	999999	40.59	0.000000	0	1	0	0.00	(Average)
gudang	0	0	1.52484	0.000000	0	0	0	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location Name	Scheduled Hours	% Empty	% Partially Occupied	% Full	% Down	
bahan baku	1	0.00	100.00	0.00	0.00	(Average)
bahan baku	0	0.00	0.00	0.00	0.00	(Std. Dev.)
Buff bb	1	24.87	75.13	0.00	0.00	(Average)
Buff bb	0	16.85	16.85	0.00	0.00	(Std. Dev.)
gudang	1	100.00	0.00	0.00	0.00	(Average)
gudang	0	0.00	0.00	0.00	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Single Capacity/Tanks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down	
O st1	1	86.45	0.00	7.31	0.00	4.57	1.67	(Average)
O st1	0	3.43	0.00	4.46	0.00	2.89	0.00	(Std. Dev.)
Buff 1	1	0.00	0.00	42.21	0.00	57.79	0.00	(Average)
Buff 1	0	0.00	0.00	17.16	0.00	17.16	0.00	(Std. Dev.)
O st2	1	92.85	0.00	7.15	0.00	0.00	0.00	(Average)
O st2	0	2.98	0.00	2.98	0.00	0.00	0.00	(Std. Dev.)
Buff 2	1	0.00	0.00	98.24	0.00	1.76	0.00	(Average)
Buff 2	0	0.00	0.00	1.12	0.00	1.12	0.00	(Std. Dev.)
O st3	1	76.52	0.00	23.48	0.00	0.00	0.00	(Average)
O st3	0	3.04	0.00	3.04	0.00	0.00	0.00	(Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed	
car1	bahan baku	0	(Average)
car1	bahan baku	0	(Std. Dev.)
car2	Buff 1	0	(Average)
car2	Buff 1	0	(Std. Dev.)
car3	Buff 2	0	(Average)
car3	Buff 2	0	(Std. Dev.)

ENTITY ACTIVITY

Entity Name	Total Exits	Current Quantity In System	Average Seconds In System	Average Seconds In Move Logic	Average Seconds Wait For Res, etc.	Average Seconds In Operation	Average Seconds Blocked	
car1	0	10.43	-	-	-	-	-	(Average)
car1	0	4.31407	-	-	-	-	-	(Std. Dev.)
car2	0	1.82	-	-	-	-	-	(Average)
car2	0	0.386123	-	-	-	-	-	(Std. Dev.)
car3	0	0.84	-	-	-	-	-	(Average)
car3	0	0.443129	-	-	-	-	-	(Std. Dev.)
car4	40.59	0	620.967187	0.000000	0.000000	369.290579	251.676607	(Average)
car4	1.52484	0	126.687130	0.000000	0.000000	2.389873	126.088814	(Std. Dev.)

ENTITY STATES BY PERCENTAGE

Entity Name	In Move Logic	Wait For Res, etc.	In Operation	Blocked	
car1	-	-	-	-	(Average)
car1	-	-	-	-	(Std. Dev.)
car2	-	-	-	-	(Average)
car2	-	-	-	-	(Std. Dev.)
car3	-	-	-	-	(Average)
car3	-	-	-	-	(Std. Dev.)
car4	0.00	0.00	61.96	38.04	(Average)
car4	0.00	0.00	12.57	12.57	(Std. Dev.)

VARIABLES

Variable Name	Total Changes	Average Seconds Per Change	Minimum Value	Maximum Value	Current Value	Average Value	
jadi	40.59	87.726322	0	40.59	40.59	19.1663	(Average)
jadi	1.52484	3.225153	0	1.52484	1.52484	0.838801	(Std. Dev.)
wip	82.84	43.179266	0.22	4.5	2.66	3.1994	(Average)
wip	2.93953	1.565531	0.416333	0.502519	0.516789	0.248636	(Std. Dev.)

General Report

Output from A:\ST3 TIDAK NORMAL.2.1r(baru).1.MOD

Date: May/28/2005 Time: 04:41:37 AM

Scenario : Normal Run
Replication : Average
Period : Final Report (0 sec to 48 hr Elapsed: 48 hr)
Simulation Time : 48 hr

LOCATIONS

Location Name	Scheduled Hours	Capacity	Total Entries	Average Seconds Per Entry	Average Contents	Maximum Contents	Current Contents	% Util	
bahan baku	48	999999	2434.43	159.520354	2.24735	9.23333	2.33333	0.00	(Average)
bahan baku	0	0	29.9697	0.060005	0.0275255	1.0063	1.32179	0.00	(Std. Dev.)
Buff bb	48	999999	2432.1	11796.256901	166.176	325.633	323.633	0.02	(Average)
Buff bb	0	0	29.7488	1150.037864	17.9345	30.209	30.8114	0.00	(Std. Dev.)
O st1	48	1	2108.47	80.480788	0.981998	1	1	90.89	(Average)
O st1	0	0	6.98636	0.269309	0.000875464	0	0	0.36	(Std. Dev.)
Buff 1	48	1	2108.47	66.354566	0.809607	1	0.733333	80.96	(Average)
Buff 1	0	0	6.98636	1.397212	0.0153835	0	0.449776	1.54	(Std. Dev.)

O st2	48	1	2107.73	81.704284	0.99658	1	1	99.66	(Average)
O st2	0	0	6.91791	0.282026	0.000788878	0	0	0.08	(Std. Dev.)
Buff 2	48	1	2107.73	1.799012	0.0219459	1	0.1	2.19	(Average)
Buff 2	0	0	6.91791	0.143706	0.00178538	0	0.305129	0.18	(Std. Dev.)
O st3	48	1	2107.63	67.227212	0.819966	1	0.933333	82.00	(Average)
O st3	0	0	6.99499	0.130498	0.00294323	0	0.253708	0.29	(Std. Dev.)
gudang	48	999999	2106.7	0.000000	0	1	0	0.00	(Average)
gudang	0	0	7.01796	0.000000	0	0	0	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location Name	Scheduled Hours	% Empty	% Partially Occupied	% Full	% Down	
bahan baku	48	0.00	100.00	0.00	0.00	(Average)
bahan baku	0	0.00	0.00	0.00	0.00	(Std. Dev.)
Buff bb	48	0.49	99.51	0.00	0.00	(Average)
Buff bb	0	0.42	0.42	0.00	0.00	(Std. Dev.)
gudang	48	100.00	0.00	0.00	0.00	(Average)
gudang	0	0.00	0.00	0.00	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Single Capacity/Tanks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down	
O st1	48	90.89	0.00	0.13	0.00	7.31	1.67	(Average)
O st1	0	0.36	0.00	0.09	0.00	0.37	0.00	(Std. Dev.)
Buff 1	48	0.00	0.00	19.04	0.00	80.96	0.00	(Average)
Buff 1	0	0.00	0.00	1.54	0.00	1.54	0.00	(Std. Dev.)
O st2	48	99.66	0.00	0.34	0.00	0.00	0.00	(Average)
O st2	0	0.08	0.00	0.08	0.00	0.00	0.00	(Std. Dev.)
Buff 2	48	0.00	0.00	97.81	0.00	2.19	0.00	(Average)
Buff 2	0	0.00	0.00	0.18	0.00	0.18	0.00	(Std. Dev.)
O st3	48	82.00	0.00	18.00	0.00	0.00	0.00	(Average)
O st3	0	0.29	0.00	0.29	0.00	0.00	0.00	(Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed	
car1	bahan baku	0	(Average)
car1	bahan baku	0	(Std. Dev.)
car2	Buff 1	0	(Average)
car2	Buff 1	0	(Std. Dev.)
car3	Buff 2	0	(Average)

car3 Buff 2 0 (Std. Dev.)

ENTITY ACTIVITY

Entity Name	Total Exits	Current Quantity In System	Average Seconds In System	Average Seconds In Move Logic	Average Seconds Wait For Res, etc.	Average Seconds In Operation	Average Seconds Blocked	
car1	0	326.967	-	-	-	-	-	(Average)
car1	0	31.1099	-	-	-	-	-	(Std. Dev.)
car2	0	1.73333	-	-	-	-	-	(Average)
car2	0	0.449776	-	-	-	-	-	(Std. Dev.)
car3	0	1.03333	-	-	-	-	-	(Average)
car3	0	0.413841	-	-	-	-	-	(Std. Dev.)
car4	2106.7	0	12248.982214	0.000000	0.000000	382.810422	11866.171792	(Average)
car4	7.01796	0	1188.306825	0.000000	0.000000	0.362153	1188.293545	(Std. Dev.)

ENTITY STATES BY PERCENTAGE

Entity Name	In Move Logic	Wait For Res, etc.	% In Operation	% Blocked	
car1	-	-	-	-	(Average)
car1	-	-	-	-	(Std. Dev.)
car2	-	-	-	-	(Average)
car2	-	-	-	-	(Std. Dev.)
car3	-	-	-	-	(Average)
car3	-	-	-	-	(Std. Dev.)
car4	0.00	0.00	3.15	96.85	(Average)
car4	0.00	0.00	0.31	0.31	(Std. Dev.)

VARIABLES

Variable Name	Total Changes	Average Seconds Per Change	Minimum Value	Maximum Value	Current Value	Average Value	
jadi	2106.7	82.002184	0	2106.7	2106.7	1052.42	(Average)
jadi	7.01796	0.270280	0	7.01796	7.01796	4.30078	(Std. Dev.)
wip	4215.17	40.987828	0.366667	5	2.76667	3.6301	(Average)
wip	13.9977	0.134673	0.490133	0	0.430183	0.0141671	(Std. Dev.)

General Report

Output from A:\ST3 TIDAK NORMAL.2.1r(baru).1.MOD

Date: May/28/2005 Time: 05:11:25 AM

Scenario : Normal Run
Replication : Average
Period : Final Report (0 sec to 48 hr Elapsed: 48 hr)
Simulation Time : 48 hr

LOCATIONS

Location Name	Scheduled Hours	Capacity	Total Entries	Average Seconds Per Entry	Average Contents	Maximum Contents	Current Contents	% Util	
bahan baku	48	999999	2437.23	159.532119	2.2501	9.3	2.13333	0.00	(Average)
bahan baku	0	0	29.2936	0.030676	0.0271376	1.29055	0.819307	0.00	(Std. Dev.)
Buff bb	48	999999	2435.1	11132.694894	157.001	317.433	315.267	0.02	(Average)
Buff bb	0	0	29.2932	1023.315085	15.8544	28.3083	28.4883	0.00	(Std. Dev.)
O st1	48	1	2119.83	80.046019	0.981958	1	1	91.40	(Average)
O st1	0	0	7.25441	0.273905	0.000844816	0	0	0.34	(Std. Dev.)
Buff 1	48	7	2119.83	538.111621	6.60117	7	6.86667	94.30	(Average)
Buff 1	0	0	7.25441	6.655132	0.0727218	0	0.345746	1.04	(Std. Dev.)
O st2	48	1	2112.97	81.672796	0.998669	1	1	99.87	(Average)
O st2	0	0	7.12201	0.273561	0.000494128	0	0	0.05	(Std. Dev.)
Buff 2	48	1	2112.97	1.825242	0.0223218	1	0.0666667	2.23	(Average)
Buff 2	0	0	7.12201	0.144988	0.00181629	0	0.253708	0.18	(Std. Dev.)
O st3	48	1	2112.9	67.229901	0.822048	1	0.766667	82.20	(Average)
O st3	0	0	7.16962	0.148710	0.00318613	0	0.430183	0.32	(Std. Dev.)
gudang	48	999999	2112.13	0.000000	0	1	0	0.00	(Average)
gudang	0	0	7.11353	0.000000	0	0	0	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location Name	Scheduled Hours	% Empty	% Partially Occupied	% Full	% Down	
bahan baku	48	0.00	100.00	0.00	0.00	(Average)
bahan baku	0	0.00	0.00	0.00	0.00	(Std. Dev.)
Buff bb	48	0.49	99.51	0.00	0.00	(Average)
Buff bb	0	0.38	0.38	0.00	0.00	(Std. Dev.)
Buff 1	48	0.70	23.61	75.69	0.00	(Average)
Buff 1	0	0.30	2.33	2.40	0.00	(Std. Dev.)
gudang	48	100.00	0.00	0.00	0.00	(Average)
gudang	0	0.00	0.00	0.00	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Single Capacity/Tanks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down	
O st1	48	91.40	0.00	0.13	0.00	6.80	1.67	(Average)
O st1	0	0.34	0.00	0.08	0.00	0.35	0.00	(Std. Dev.)
O st2	48	99.87	0.00	0.13	0.00	0.00	0.00	(Average)
O st2	0	0.05	0.00	0.05	0.00	0.00	0.00	(Std. Dev.)
Buff 2	48	0.00	0.00	97.77	0.00	2.23	0.00	(Average)
Buff 2	0	0.00	0.00	0.18	0.00	0.18	0.00	(Std. Dev.)
O st3	48	82.21	0.00	17.79	0.00	0.00	0.00	(Average)
O st3	0	0.32	0.00	0.32	0.00	0.00	0.00	(Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed	
car1	bahan baku	0	(Average)
car1	bahan baku	0	(Std. Dev.)
car2	Buff 1	0	(Average)
car2	Buff 1	0	(Std. Dev.)
car3	Buff 2	0	(Average)
car3	Buff 2	0	(Std. Dev.)

ENTITY ACTIVITY

Entity Name	Total Exits	Current Quantity In System	Average Seconds In System	Average Seconds In Move Logic	Average Seconds Wait For Res, etc.	Average Seconds In Operation	Average Seconds Blocked	
car1	0	318.4	-	-	-	-	-	(Average)
car1	0	28.4455	-	-	-	-	-	(Std. Dev.)
car2	0	7.86667	-	-	-	-	-	(Average)
car2	0	0.345746	-	-	-	-	-	(Std. Dev.)
car3	0	0.833333	-	-	-	-	-	(Average)
car3	0	0.530669	-	-	-	-	-	(Std. Dev.)
car4	2112.13	0	11988.684948	0.000000	0.000000	382.791646	11605.893302	(Average)
car4	7.11353	0	1054.787345	0.000000	0.000000	0.388618	1054.842311	(Std. Dev.)

ENTITY STATES BY PERCENTAGE

Entity Name	In Move Logic	Wait For Res, etc.	% In Operation	% Blocked	
car1	-	-	-	-	(Average)

car1	-	-	-	-	(Std. Dev.)
car2	-	-	-	-	(Average)
car2	-	-	-	-	(Std. Dev.)
car3	-	-	-	-	(Average)
car3	-	-	-	-	(Std. Dev.)
car4	0.00	0.00	3.22	96.78	(Average)
car4	0.00	0.00	0.28	0.28	(Std. Dev.)

VARIABLES

Variable Name	Total Changes	Average Seconds Per Change	Minimum Value	Maximum Value	Current Value	Average Value	
jadi	2112.13	81.794337	0	2112.13	2112.13	1054.43	(Average)
jadi	7.11353	0.276009	0	7.11353	7.11353	3.7955	(Std. Dev.)
wip	4231.97	40.826337	0.3	11	8.7	9.42617	(Average)
wip	14.3611	0.138690	0.466092	0	0.466092	0.072001	(Std. Dev.)

General Report

Output from A:\ST4 TIDAK NORMAL.1r(baru).1.MOD

Date: May/28/2005 Time: 05:57:18 AM

Scenario : Normal Run
 Replication : Average
 Period : Final Report (0 sec to 48 hr Elapsed: 48 hr)
 Simulation Time : 48 hr

LOCATIONS

Location Name	Scheduled Hours	Capacity	Total Entries	Average Seconds Per Entry	Average Contents	Maximum Contents	Current Contents	% Util	
bahan baku	48	999999	3361.7	159.520711	3.10336	11.6333	3.7	0.00	(Average)
bahan baku	0	0	44.1542	0.042698	0.0408976	1.5196	1.44198	0.00	(Std. Dev.)
Buff bb	48	999999	3358	12690.378798	246.859	497.333	495.367	0.02	(Average)
Buff bb	0	0	44.0869	1163.086685	25.4414	41.2481	41.33	0.00	(Std. Dev.)
O st1	47.2	1	2862.63	59.251047	0.998195	1	1	75.69	(Average)
O st1	2.168068936e-14	0	5.95664	0.138074	0.00130198	0	0	0.20	(Std. Dev.)
Buff 1	48	1	2862.63	58.493347	0.969007	1	1	96.90	(Average)
Buff 1	0	0	5.95664	0.193316	0.00266141	0	0	0.27	(Std. Dev.)
O st2	48	1	2861.63	60.302012	0.99862	1	1	99.86	(Average)
O st2	0	0	5.95664	0.121095	0.000569661	0	0	0.06	(Std. Dev.)
Buff 2	48	1	2861.63	0.056878	0.000941894	1	0	0.09	(Average)
Buff 2	0	0	5.95664	0.011643	0.000192772	0	0	0.02	(Std. Dev.)
O st3	48	1	2861.63	45.300959	0.750201	1	0.733333	75.02	(Average)
O st3	0	0	5.95664	0.044837	0.00152429	0	0.449776	0.15	(Std. Dev.)

gudang	48	999999	2861.17	0.000000	0	1	0	0.00	(Average)
gudang	0	0	5.95433	0.000000	0	0	0	0.00	(Std. Dev.)
O st4	48	1	2861.9	47.797778	0.791622	1	0.733333	79.16	(Average)
O st4	0	0	5.92103	0.062527	0.00164671	0	0.449776	0.16	(Std. Dev.)
Buff 3	48	1	2861.9	0.299924	0.00496749	1	0	0.50	(Average)
Buff 3	0	0	5.92103	0.022069	0.000366214	0	0	0.04	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location Name	Scheduled Hours	% Empty	% Partially Occupied	% Full	% Down	
bahan baku	48	0.00	100.00	0.00	0.00	(Average)
bahan baku	0	0.00	0.00	0.00	0.00	(Std. Dev.)
Buff bb	48	0.50	99.50	0.00	0.00	(Average)
Buff bb	0	0.38	0.38	0.00	0.00	(Std. Dev.)
gudang	48	100.00	0.00	0.00	0.00	(Average)
gudang	0	0.00	0.00	0.00	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Single Capacity/Tanks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down	
O st1	47.2	75.69	0.00	0.18	0.00	24.13	0.00	(Average)
O st1	2.168068936e-14	0.20	0.00	0.13	0.00	0.22	0.00	(Std. Dev.)
Buff 1	48	0.00	0.00	3.10	0.00	96.90	0.00	(Average)
Buff 1	0	0.00	0.00	0.27	0.00	0.27	0.00	(Std. Dev.)
O st2	48	99.86	0.00	0.14	0.00	0.00	0.00	(Average)
O st2	0	0.06	0.00	0.06	0.00	0.00	0.00	(Std. Dev.)
Buff 2	48	0.00	0.00	99.91	0.00	0.09	0.00	(Average)
Buff 2	0	0.00	0.00	0.02	0.00	0.02	0.00	(Std. Dev.)
O st3	48	75.02	0.00	24.98	0.00	0.00	0.00	(Average)
O st3	0	0.15	0.00	0.15	0.00	0.00	0.00	(Std. Dev.)
O st4	48	79.16	0.00	20.84	0.00	0.00	0.00	(Average)
O st4	0	0.16	0.00	0.16	0.00	0.00	0.00	(Std. Dev.)
Buff 3	48	0.00	0.00	99.50	0.00	0.50	0.00	(Average)
Buff 3	0	0.00	0.00	0.04	0.00	0.04	0.00	(Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed	
car1	bahan baku	0	(Average)
car1	bahan baku	0	(Std. Dev.)
car2	Buff 1	0	(Average)
car2	Buff 1	0	(Std. Dev.)

car3	Buff 2	0	(Average)
car3	Buff 2	0	(Std. Dev.)
car4	Buff 3	0	(Average)
car4	Buff 3	0	(Std. Dev.)

ENTITY ACTIVITY

Entity Name	Total Exits	Current Quantity In System	Average Seconds In System	Average Seconds In Move Logic	Average Seconds Wait For Res, etc.	Average Seconds In Operation	Average Seconds Blocked	
car1	0	500.067	-	-	-	-	-	(Average)
car1	0	41.4529	-	-	-	-	-	(Std. Dev.)
car2	0	2	-	-	-	-	-	(Average)
car2	0	0	-	-	-	-	-	(Std. Dev.)
car3	0	0.733333	-	-	-	-	-	(Average)
car3	0	0.449776	-	-	-	-	-	(Std. Dev.)
car4	0	0.733333	-	-	-	-	-	(Average)
car4	0	0.449776	-	-	-	-	-	(Std. Dev.)
car5	2861.17	0	13077.818279	0.000000	0.000000	357.679069	12720.139210	(Average)
car5	5.95433	0	1197.176757	0.000000	0.000000	0.188683	1197.213913	(Std. Dev.)

ENTITY STATES BY PERCENTAGE

Entity Name	In Move Logic	Wait For Res, etc.	In Operation	Blocked	
car1	-	-	-	-	(Average)
car1	-	-	-	-	(Std. Dev.)
car2	-	-	-	-	(Average)
car2	-	-	-	-	(Std. Dev.)
car3	-	-	-	-	(Average)
car3	-	-	-	-	(Std. Dev.)
car4	-	-	-	-	(Average)
car4	-	-	-	-	(Std. Dev.)
car5	0.00	0.00	2.76	97.24	(Average)
car5	0.00	0.00	0.26	0.26	(Std. Dev.)

VARIABLES

Variable Name	Total Changes	Average Seconds Per Change	Minimum Value	Maximum Value	Current Value	Average Value	
jadi	2861.17	60.385165	0	2861.17	2861.17	1428.65	(Average)
jadi	5.95433	0.126060	0	5.95433	5.95433	3.31381	(Std. Dev.)
wip	5723.8	30.186942	0.3	6	3.46667	4.49692	(Average)
wip	11.9002	0.062879	0.466092	0	0.507416	0.00580007	(Std. Dev.)

General Report

Output from A:\ST4 TIDAK NORMAL.1r(baru).1.MOD

Date: May/28/2005 Time: 06:27:45 AM

Scenario : Normal Run
Replication : Average
Period : Final Report (0 sec to 48 hr Elapsed: 48 hr)
Simulation Time : 48 hr

LOCATIONS

Location Name	Scheduled Hours	Capacity	Total Entries	Average Seconds Per Entry	Average Contents	Maximum Contents	Current Contents	% Util	
bahan baku	48	999999	3363.73	159.522655	3.10528	11.5	3.23333	0.00	(Average)
bahan baku	0	0	42.2129	0.027775	0.0390434	0.937715	1.25075	0.00	(Std. Dev.)
Buff bb	48	999999	3360.5	12231.683843	238.074	487.633	485.633	0.02	(Average)
Buff bb	0	0	42.5277	1056.253022	23.0531	43.9894	43.2829	0.00	(Std. Dev.)
0 st1	47.2	1	2874.87	58.860859	0.995859	1	1	76.04	(Average)
0 st1	2.168068936e-14	0	6.20196	0.185244	0.00208433	0	0	0.18	(Std. Dev.)
Buff 1	48	10	2874.87	591.075460	9.83364	10	10	98.34	(Average)
Buff 1	0	0	6.20196	3.778742	0.0574495	0	0	0.57	(Std. Dev.)
0 st2	48	1	2864.87	60.246844	0.998833	1	1	99.88	(Average)
0 st2	0	0	6.20196	0.129772	0.000382592	0	0	0.04	(Std. Dev.)
Buff 2	48	1	2864.87	0.061076	0.00101281	1	0	0.10	(Average)
Buff 2	0	0	6.20196	0.012544	0.00020922	0	0	0.02	(Std. Dev.)
0 st3	48	1	2864.87	45.287010	0.750817	1	0.733333	75.08	(Average)
0 st3	0	0	6.20196	0.066947	0.00179473	0	0.449776	0.18	(Std. Dev.)
gudang	48	999999	2864.27	0.000000	0	1	0	0.00	(Average)
gudang	0	0	6.0111	0.000000	0	0	0	0.00	(Std. Dev.)
0 st4	48	1	2865.13	47.813975	0.792786	1	0.866667	79.28	(Average)
0 st4	0	0	6.00995	0.052295	0.00190004	0	0.345746	0.19	(Std. Dev.)
Buff 3	48	1	2865.13	0.304449	0.00504842	1	0	0.50	(Average)
Buff 3	0	0	6.00995	0.025237	0.000424658	0	0	0.04	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location Name	Scheduled Hours	% Empty	% Partially Occupied	% Full	% Down	
bahan baku	48	0.00	100.00	0.00	0.00	(Average)
bahan baku	0	0.00	0.00	0.00	0.00	(Std. Dev.)
Buff bb	48	1.26	98.74	0.00	0.00	(Average)
Buff bb	0	0.60	0.60	0.00	0.00	(Std. Dev.)
Buff 1	48	0.36	4.74	94.90	0.00	(Average)

Buff 1	0	0.22	0.77	0.80	0.00	(Std. Dev.)
gudang	48	100.00	0.00	0.00	0.00	(Average)
gudang	0	0.00	0.00	0.00	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Single Capacity/Tanks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down
O st1	47.2	76.04	0.00	0.41	0.00	23.54	0.00 (Average)
O st1	2.168068936e-14	0.18	0.00	0.21	0.00	0.26	0.00 (Std. Dev.)
O st2	48	99.88	0.00	0.12	0.00	0.00	0.00 (Average)
O st2	0	0.04	0.00	0.04	0.00	0.00	0.00 (Std. Dev.)
Buff 2	48	0.00	0.00	99.90	0.00	0.10	0.00 (Average)
Buff 2	0	0.00	0.00	0.02	0.00	0.02	0.00 (Std. Dev.)
O st3	48	75.08	0.00	24.92	0.00	0.00	0.00 (Average)
O st3	0	0.18	0.00	0.18	0.00	0.00	0.00 (Std. Dev.)
O st4	48	79.28	0.00	20.72	0.00	0.00	0.00 (Average)
O st4	0	0.19	0.00	0.19	0.00	0.00	0.00 (Std. Dev.)
Buff 3	48	0.00	0.00	99.49	0.00	0.51	0.00 (Average)
Buff 3	0	0.00	0.00	0.04	0.00	0.04	0.00 (Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed
car1	bahan baku	0 (Average)
car1	bahan baku	0 (Std. Dev.)
car2	Buff 1	0 (Average)
car2	Buff 1	0 (Std. Dev.)
car3	Buff 2	0 (Average)
car3	Buff 2	0 (Std. Dev.)
car4	Buff 3	0 (Average)
car4	Buff 3	0 (Std. Dev.)

ENTITY ACTIVITY

Entity Name	Total Exits	Current Quantity In System	Average Seconds In System	Average Seconds In Move Logic	Average Seconds Wait For Res, etc.	Average Seconds In Operation	Average Seconds Blocked
car1	0	489.867	-	-	-	-	- (Average)
car1	0	42.9617	-	-	-	-	- (Std. Dev.)
car2	0	11	-	-	-	-	- (Average)
car2	0	0	-	-	-	-	- (Std. Dev.)
car3	0	0.733333	-	-	-	-	- (Average)

car3	0	0.449776	-	-	-	-	-	-	(Std. Dev.)
car4	0	0.866667	-	-	-	-	-	-	(Average)
car4	0	0.345746	-	-	-	-	-	-	(Std. Dev.)
car5	2864.27	0	13063.659555	0.000000	0.000000	357.452321	12706.007235		(Average)
car5	6.0111	0	1077.041173	0.000000	0.000000	0.190649	1077.003492		(Std. Dev.)

ENTITY STATES BY PERCENTAGE

Entity Name	In Move Logic	Wait For Res, etc.	In Operation	Blocked	
car1	-	-	-	-	(Average)
car1	-	-	-	-	(Std. Dev.)
car2	-	-	-	-	(Average)
car2	-	-	-	-	(Std. Dev.)
car3	-	-	-	-	(Average)
car3	-	-	-	-	(Std. Dev.)
car4	-	-	-	-	(Average)
car4	-	-	-	-	(Std. Dev.)
car5	0.00	0.00	2.76	97.24	(Average)
car5	0.00	0.00	0.23	0.23	(Std. Dev.)

VARIABLES

Variable Name	Total Changes	Average Seconds Per Change	Minimum Value	Maximum Value	Current Value	Average Value	
jadi	2864.27	60.318879	0	2864.27	2864.27	1430.22	(Average)
jadi	6.0111	0.128622	0	6.0111	6.0111	3.13743	(Std. Dev.)
wip	5739.13	30.106636	0.366667	15	12.6	13.3614	(Average)
wip	12.2044	0.064094	0.490133	0	0.498273	0.0594658	(Std. Dev.)

General Report

Output from A:\New Folder\hs.1(simulasi st5)\5ST.MOD

Date: May/28/2005 Time: 08:37:07 AM

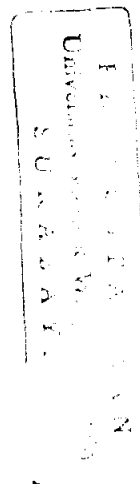
Scenario : Normal Run
 Replication : Average
 Period : Final Report (0 sec to 48 hr Elapsed: 48 hr)
 Simulation Time : 48 hr

LOCATIONS

Location	Scheduled		Total	Average	Average	Maximum	Current	
Name	Hours	Capacity	Entries	Seconds	Contents	Contents	Contents	% Util
				Per Entry				
tamiya	48	999999	5429.3	478.191560	15.0246	30.0333	14.6667	0.00 (Average)
tamiya	0	0	67.058	0.156798	0.186688	1.8843	3.03239	0.00 (Std. Dev.)
Buf bb	48	999999	5414.63	14580.884476	457.183	916.367	913.867	0.05 (Average)
Buf bb	0	0	67.4268	923.362632	34.0516	65.6172	65.8461	0.00 (Std. Dev.)
O st1	48	1	4500.77	37.645241	0.980507	1	1	90.67 (Average)
O st1	0	0	9.90536	0.082802	0.000619361	0	0	0.25 (Std. Dev.)
B1	48	1	4500.77	31.236382	0.813572	1	0.866667	81.36 (Average)
B1	0	0	9.90536	0.399172	0.00937347	0	0.345746	0.94 (Std. Dev.)
O st2	48	1	4499.9	37.979834	0.989032	1	1	98.36 (Average)
O st2	0	0	9.96667	0.086449	0.00075967	0	0	0.09 (Std. Dev.)
B2	48	1	4499.9	9.539864	0.24844	1	0.2	24.84 (Average)
B2	0	0	9.96667	0.509711	0.0135005	0	0.406838	1.35 (Std. Dev.)
O st3	48	1	4499.7	35.291801	0.918996	1	1	91.90 (Average)
O st3	0	0	9.83712	0.125927	0.00393976	0	0	0.39 (Std. Dev.)
B3	48	1	4499.7	1.230515	0.0320438	1	0.0333333	3.20 (Average)
B3	0	0	9.83712	0.068444	0.00180919	0	0.182574	0.18 (Std. Dev.)
O st4	48	1	4499.67	29.109588	0.758006	1	0.766667	75.80 (Average)
O st4	0	0	9.87275	0.052152	0.00225803	0	0.430183	0.23 (Std. Dev.)
B4	48	1	4499.9	1.034165	0.0269314	1	0	2.69 (Average)
B4	0	0	9.92506	0.059175	0.00155292	0	0	0.16 (Std. Dev.)
O st5	48	1	4499.9	29.062137	0.75681	1	0.766667	75.68 (Average)
O st5	0	0	9.92506	0.053821	0.00217683	0	0.430183	0.22 (Std. Dev.)
gudang	48	999999	4499.13	0.000000	0	1	0	0.00 (Average)
gudang	0	0	9.95068	0.000000	0	0	0	0.00 (Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location	Scheduled	%	Partially	%	%
Name	Hours	Empty	Occupied	Full	Down
tamiya	48	0.00	100.00	0.00	0.00 (Average)
tamiya	0	0.00	0.00	0.00	0.00 (Std. Dev.)
Buf bb	48	0.43	99.57	0.00	0.00 (Average)
Buf bb	0	0.19	0.19	0.00	0.00 (Std. Dev.)
gudang	48	100.00	0.00	0.00	0.00 (Average)
gudang	0	0.00	0.00	0.00	0.00 (Std. Dev.)



LOCATION STATES BY PERCENTAGE (Single Capacity/Tasks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down	
O st1	48	90.67	0.00	0.28	0.00	7.38	1.67	(Average)
O st1	0	0.25	0.00	0.06	0.00	0.26	0.00	(Std. Dev.)
B1	48	0.00	0.00	18.64	0.00	81.36	0.00	(Average)
B1	0	0.00	0.00	0.94	0.00	0.94	0.00	(Std. Dev.)
O st2	48	98.36	0.00	1.09	0.00	0.54	0.00	(Average)
O st2	0	0.09	0.00	0.08	0.00	0.08	0.00	(Std. Dev.)
B2	48	0.00	0.00	75.16	0.00	24.84	0.00	(Average)
B2	0	0.00	0.00	1.35	0.00	1.35	0.00	(Std. Dev.)
O st3	48	91.90	0.00	8.10	0.00	0.00	0.00	(Average)
O st3	0	0.39	0.00	0.39	0.00	0.00	0.00	(Std. Dev.)
B3	48	0.00	0.00	96.80	0.00	3.20	0.00	(Average)
B3	0	0.00	0.00	0.18	0.00	0.18	0.00	(Std. Dev.)
O st4	48	75.80	0.00	24.20	0.00	0.00	0.00	(Average)
O st4	0	0.23	0.00	0.23	0.00	0.00	0.00	(Std. Dev.)
B4	48	0.00	0.00	97.31	0.00	2.69	0.00	(Average)
B4	0	0.00	0.00	0.16	0.00	0.16	0.00	(Std. Dev.)
O st5	48	75.68	0.00	24.32	0.00	0.00	0.00	(Average)
O st5	0	0.22	0.00	0.22	0.00	0.00	0.00	(Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed	
car1	tamiya	0	(Average)
car1	tamiya	0	(Std. Dev.)
car2	B1	0	(Average)
car2	B1	0	(Std. Dev.)
car3	B2	0	(Average)
car3	B2	0	(Std. Dev.)
car4	B3	0	(Average)
car4	B3	0	(Std. Dev.)
car5	B4	0	(Average)
car5	B4	0	(Std. Dev.)

ENTITY ACTIVITY

Entity	Total	Current	Average	Average	Average	Average	Average
Name	Exits	Quantity	Seconds	Seconds	Seconds	Seconds	Seconds
		In System	In System	In Move	Wait For	In	Blocked
				Logic	Res, etc.	Operation	
car1	0	929.533	-	-	-	-	(Average)
car1	0	65.5774	-	-	-	-	(Std. Dev.)
car2	0	1.86667	-	-	-	-	(Average)
car2	0	0.345746	-	-	-	-	(Std. Dev.)
car3	0	1.2	-	-	-	-	(Average)
car3	0	0.406838	-	-	-	-	(Std. Dev.)
car4	0	0.8	-	-	-	-	(Average)
car4	0	0.484234	-	-	-	-	(Std. Dev.)
car5	0	0.766667	-	-	-	-	(Average)
car5	0	0.430183	-	-	-	-	(Std. Dev.)
car6	4499.13	0	15268.621905	0.000000	0.000000	644.360834	14624.261072
car6	9.95068	0	957.700155	0.000000	0.000000	0.162712	957.720430

ENTITY STATES BY PERCENTAGE

Entity	In Move	Wait For	In Operation	Blocked
Name	Logic	Res, etc.		
car1	-	-	-	-
car1	-	-	-	-
car2	-	-	-	-
car2	-	-	-	-
car3	-	-	-	-
car3	-	-	-	-
car4	-	-	-	-
car4	-	-	-	-
car5	-	-	-	-
car5	-	-	-	-
car6	0.00	0.00	4.24	95.76
car6	0.00	0.00	0.27	0.27

VARIABLES

Variable	Total	Average	Minimum	Maximum	Current	Average
Name	Changes	Seconds	Value	Value	Value	Value
wip	8998.93	19.201019	4	2.86667	4.643213	0.617633
wip	19.8788	0.042343	0	0.345746	0.546672	0.0220365
jadi	4499.13	38.403469	0	4499.13	4499.13	2243.03

jadi 9.95068 0.084599 0 9.95068 9.95068 5.26532 (Std. Dev.)

General Report

Output from A:\New Folder\hs.1(simulasi st5)\SST.MOD

Date: May/28/2005 Time: 09:09:51 AM

Scenario : Normal Run
Replication : Average
Period : Final Report (0 sec to 48 hr Elapsed: 48 hr)
Simulation Time : 48 hr

LOCATIONS

Location Name	Scheduled Hours	Capacity	Total Entries	Average Seconds Per Entry	Average Contents	Maximum Contents	Current Contents	% Util	
tamiya	48	999999	5405.73	478.133593	14.9575	29.6333	15.4333	0.00	(Average)
tamiya	0	0	53.7317	0.176032	0.147673	2.90639	3.72025	0.00	(Std. Dev.)
Buf bb	48	999999	5390.3	13517.617055	421.869	851.267	849.667	0.04	(Average)
Buf bb	0	0	53.2296	868.190207	30.382	52.3779	52.3867	0.00	(Std. Dev.)
O st1	48	1	4540.63	37.306091	0.980281	1	1	91.47	(Average)
O st1	0	0	10.4568	0.078785	0.000778197	0	0	0.25	(Std. Dev.)
B1	48	10	4540.63	361.487436	9.4987	10	9.7	99.03	(Average)
B1	0	0	10.4568	2.422570	0.0614638	0	0.534983	0.13	(Std. Dev.)
O st2	48	1	4530.93	38.016744	0.99682	1	1	99.68	(Average)
O st2	0	0	10.3788	0.079942	0.000587956	0	0	0.06	(Std. Dev.)
B2	48	1	4530.93	10.220669	0.267996	1	0.366667	26.80	(Average)
B2	0	0	10.3788	0.506602	0.0133528	0	0.490133	1.34	(Std. Dev.)
O st3	48	1	4530.57	35.290949	0.925276	1	0.8	92.53	(Average)
O st3	0	0	10.4772	0.113195	0.00306103	0	0.406838	0.31	(Std. Dev.)
B3	48	1	4530.77	1.252015	0.0328283	1	0	3.28	(Average)
B3	0	0	10.5657	0.068214	0.00180794	0	0	0.18	(Std. Dev.)
O st4	48	1	4530.77	29.077056	0.762391	1	0.8	76.24	(Average)
O st4	0	0	10.5657	0.061239	0.00191049	0	0.406838	0.19	(Std. Dev.)
B4	48	1	4530.97	1.073607	0.0281519	1	0.0333333	2.82	(Average)
B4	0	0	10.3407	0.049243	0.00131444	0	0.182574	0.13	(Std. Dev.)
O st5	48	1	4530.93	29.063096	0.762054	1	0.8	76.21	(Average)
O st5	0	0	10.3622	0.055341	0.00233672	0	0.406838	0.23	(Std. Dev.)
gudang	48	999999	4530.13	0.000000	0	1	0	0.00	(Average)
gudang	0	0	10.2947	0.000000	0	0	0	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Multiple Capacity)

Location Name	Scheduled Hours	% Empty	% Partially Occupied	% Full	% Down	
tamiya	48	0.00	100.00	0.00	0.00	(Average)
tamiya	0	0.00	0.00	0.00	0.00	(Std. Dev.)
Buf bb	48	0.52	99.48	0.00	0.00	(Average)
Buf bb	0	0.28	0.28	0.00	0.00	(Std. Dev.)
B1	48	0.68	26.85	72.47	0.00	(Average)
B1	0	0.36	1.05	1.05	0.00	(Std. Dev.)
gudang	48	100.00	0.00	0.00	0.00	(Average)
gudang	0	0.00	0.00	0.00	0.00	(Std. Dev.)

LOCATION STATES BY PERCENTAGE (Single Capacity/Tanks)

Location Name	Scheduled Hours	% Operation	% Setup	% Idle	% Waiting	% Blocked	% Down	
O st1	48	91.47	0.00	0.30	0.00	6.56	1.67	(Average)
O st1	0	0.25	0.00	0.08	0.00	0.22	0.00	(Std. Dev.)
O st2	48	99.03	0.00	0.32	0.00	0.65	0.00	(Average)
O st2	0	0.13	0.00	0.06	0.00	0.12	0.00	(Std. Dev.)
B2	48	0.00	0.00	73.20	0.00	26.80	0.00	(Average)
B2	0	0.00	0.00	1.33	0.00	1.33	0.00	(Std. Dev.)
O st3	48	92.53	0.00	7.47	0.00	0.00	0.00	(Average)
O st3	0	0.31	0.00	0.31	0.00	0.00	0.00	(Std. Dev.)
B3	48	0.00	0.00	96.72	0.00	3.28	0.00	(Average)
B3	0	0.00	0.00	0.18	0.00	0.18	0.00	(Std. Dev.)
O st4	48	76.24	0.00	23.76	0.00	0.00	0.00	(Average)
O st4	0	0.19	0.00	0.19	0.00	0.00	0.00	(Std. Dev.)
B4	48	0.00	0.00	97.19	0.00	2.81	0.00	(Average)
B4	0	0.00	0.00	0.13	0.00	0.13	0.00	(Std. Dev.)
O st5	48	76.21	0.00	23.79	0.00	0.00	0.00	(Average)
O st5	0	0.23	0.00	0.23	0.00	0.00	0.00	(Std. Dev.)

FAILED ARRIVALS

Entity Name	Location Name	Total Failed	
car1	tamiya	0	(Average)
car1	tamiya	0	(Std. Dev.)
car2	B1	0	(Average)
car2	B1	0	(Std. Dev.)

car3	B1	0	(Average)
car3	B2	0	(Std. Dev.)
car4	B3	0	(Average)
car4	B3	0	(Std. Dev.)
car5	B4	0	(Average)
car5	B4	0	(Std. Dev.)

ENTITY ACTIVITY

Entity Name	Total Exits	Current Quantity In System	Average Seconds In System	Average Seconds In Move Logic	Average Seconds Wait For Res, etc.	Average Seconds In Operation	Average Seconds Blocked	
car1	0	866.1	-	-	-	-	-	(Average)
car1	0	53.0084	-	-	-	-	-	(Std. Dev.)
car2	0	10.7	-	-	-	-	-	(Average)
car2	0	0.534983	-	-	-	-	-	(Std. Dev.)
car3	0	1.16667	-	-	-	-	-	(Average)
car3	0	0.74664	-	-	-	-	-	(Std. Dev.)
car4	0	0.8	-	-	-	-	-	(Average)
car4	0	0.406838	-	-	-	-	-	(Std. Dev.)
car5	0	0.833333	-	-	-	-	-	(Average)
car5	0	0.461133	-	-	-	-	-	(Std. Dev.)
car6	4530.13	0	14492.477005	0.000000	0.000000	644.323275	13848.153730	(Average)
car6	10.2947	0	901.519561	0.000000	0.000000	0.197110	901.519484	(Std. Dev.)

ENTITY STATES BY PERCENTAGE

Entity Name	% In Move Logic	% Wait For Res, etc.	% In Operation	% Blocked	
car1	-	-	-	-	(Average)
car1	-	-	-	-	(Std. Dev.)
car2	-	-	-	-	(Average)
car2	-	-	-	-	(Std. Dev.)
car3	-	-	-	-	(Average)
car3	-	-	-	-	(Std. Dev.)
car4	-	-	-	-	(Average)
car4	-	-	-	-	(Std. Dev.)
car5	-	-	-	-	(Average)
car5	-	-	-	-	(Std. Dev.)
car6	0.00	0.00	4.46	95.54	(Average)
car6	0.00	0.00	0.28	0.28	(Std. Dev.)

VARIABLES

Variable	Total	Average	Minimum	Maximum	Current	Average	
Name	Changes	Seconds	Value	Value	Value	Value	
-----	-----	Per Change	-----	-----	-----	-----	
wip	9069.9	19.050372	4	11.7667	13.4933	9.33978	(Average)
wip	20.7104	0.043739	0	0.430183	0.490133	0.0655615	(Std. Dev.)
jadi	4530.13	38.140095	0	4530.13	4531.13	2257.64	(Average)
jadi	10.2947	0.086903	0	10.2947	10.2947	5.28214	(Std. Dev.)

descriptive statistics		
	data points	41
	minimum	59.8
	maximum	92.39
	mean	74.5051
	median	71.89
	mode	69.23
	standard deviation	8.52516
	variance	72.6783
	coefficient of variation	11.4424
	skewness	0.440788
	kurtosis	-0.857206
Auto::Fit Distributions		
distribution	rank	acceptance
Weibull(52.8, 2.44, 25.2)	100	accept
Erlang(39.6, 13, 2.73)	100	accept
Lognormal(21.2, 3.97, 0.181)	100	accept
Pearson 5(26.7, 24, 1.11e+03)	99.9	accept
Gamma(29.3, 22.3, 2.06)	99.9	accept
Pearson 6(55.7, 65.7, 5.18, 18)	99.7	accept
Log-Logistic(-69.2, 25.8, 144)	99	accept
Extreme Value(70.4, 8.38)	97.2	accept
Delta(55.7, 90.2, 2.26, 2.63)	96	accept
Logistic(74.7, 5.61)	95	accept
Inverse Gaussian(21.7, 1.58e+03, 53.4)	93.5	accept
Normal(75.1, 9.76)	93.3	accept
Triangular(53.5, 101, 71.8)	93.2	accept

Gambar H.1 *Fitting distribution* stasiun kerja 1 untuk *Production rate* 50

descriptive statistics	
data points	42
minimum	56.60
maximum	107.42
mean	81.7264
median	81.075
mode	79.75
standard deviation	13.1338
variance	172.497
coefficient of variation	16.0705
skewness	0.0421948
kurtosis	-0.698835

Auto::Fit Distributions		
distribution	rank	acceptance
Pearson 5[-6.84, 43.3, 3.75e+03]	99.8	accept
Weibull[46.8, 2.96, 39.1]	94.3	accept
Inverse Gaussian[-465, 9.69e+05, 547]	93.7	accept
Lognormal[-692, 6.65, 0.0168]	91.5	accept
Log Logistic[-1.63e+03, 228, 1.71e+03]	91.4	accept
Erlang[-513, 2.1e+03, 0.283]	91.3	accept
Gamma[-541, 1.73e+03, 0.36]	90.1	accept
Triangular[51.9, 112, 80.9]	86.3	accept
Normal[81.7, 13]	84.6	accept
Logistic[81.6, 7.45]	84.2	accept
Beta[56.7, 107, 1.46, 1.55]	59.7	accept

Gambar H.2 *Fitting distribution* stasiun kerja 2 untuk *Production rate* 50

descriptive statistics	
data points	42
minlimum	55.98
maximum	79.91
mean	67.2274
median	68.1
mode	71.66
standard deviation	6.15033
variance	37.8266
coefficient of variation	9.14855
skewness	0.0712483
kurtosis	-1.09079

Auto::Fit Distributions		
distribution	rank	acceptance
Gamma[-96.4, 626, 0.262]	100	accept
Beta[56, 79.9, 1.79, 2.04]	88.1	accept
Erlang[-75.4, 551, 0.259]	86.8	accept
Lognormal[-26.3, 4.54, 0.065]	81.8	accept
Inverse Gaussian[-12.4, 1.36e+04, 79.6]	79.3	accept
Log Logistic[-411, 131, 478]	77.7	accept
Weibull[53.6, 2.43, 15.4]	74.2	accept
Normal[67.2, 6.08]	66.8	accept
Logistic[67.2, 3.66]	58.9	accept
Pearson 5[25.6, 45.2, 1.84e+03]	55.7	accept
Pearson 6[56, 132, 2.92, 34.4]	29	reject

Gambar H.3 *Fitting distribution* stasiun kerja 3 untuk *Production rate* 50

descriptive statistics		
	data points	60
	minimum	37.16
	maximum	54.66
	mean	44.9382
	median	45.465
	mode	46.28
	standard deviation	3.98607
	variance	15.8888
	coefficient of variation	8.87013
	skewness	-0.0113478
	kurtosis	0.758611
Auto::Fit Distributions		
distribution	rank	acceptance
Lognormal[-712, 6.63, 0.00522]	99	accept
Weibull[33.9, 3.1, 12.3]	96.8	accept
Normal[44.9, 3.95]	88.1	accept
Logistic[45, 0.30]	78.2	accept
Pearson 5[17.3, 45.7, 1.23e+03]	47.9	accept
Triangular[36, 55.4, 43.2]	47.8	accept

Gambar H.4 *Fitting distribution* stasiun kerja 1 untuk *Production rate* 70

descriptive statistics	
data points	60
minimum	48.89
maximum	73.83
mean	60.2952
median	59.665
mode	58.57
standard deviation	6.53485
variance	42.7043
coefficient of variation	10.8381
skewness	0.135694
kurtosis	-1.07274

Auto::Fit Distributions

distribution	rank	acceptance
Beta(48.9, 73.8, 1.48, 1.77)	100	accept
Gamma(-27.3, 177, 0.496)	87.7	accept
Erlang(-24.2, 170, 0.497)	78	accept
Inverse Gaussian(16.5, 1.95e+03, 43.8)	68.3	accept
Lognormal(9.31, 3.92, 0.120)	66.4	accept
Weibull(47.3, 2.11, 14.6)	66	accept
Log-Logistic(-207, 68.6, 267)	64.7	accept
Triangular(46.8, 76, 58)	61.9	accept
Pearson 5(27, 24.7, 791)	55.3	accept
Normal(60.3, 6.40)	54	accept
Logistic(60.1, 3.89)	38.7	accept

Gambar H.5 *Fitting distribution stasiun kerja 2 untuk Production rate 70*

descriptive statistics

data points	60
minimum	38.7
maximum	53.58
mean	45.286
median	45.56
mode	45.98
standard deviation	3.36435
variance	11.3188
coefficient of variation	7.42911
skewness	0.266393
kurtosis	-0.500856

Auto::Fit Distributions

distribution	rank	acceptance
Gamma(22.7, 46, 0.492)	99.9	accept
Weibull(37.5, 2.49, 8.75)	98.5	accept
Lognormal(19.8, 3.23, 0.131)	97.6	accept
Erlang(29.5, 22, 0.717)	96.2	accept
Log-Logistic(-25.1, 36.5, 70.3)	93.8	accept
Logistic(45.1, 1.94)	90.7	accept
Beta(38.7, 53.6, 2.06, 2.61)	88.3	accept
Pearson 5(21.1, 53.8, 1.28e+03)	85	accept
Inverse Gaussian(20.6, 1.35e+03, 24.7)	77.6	accept
Normal(45.3, 3.34)	77.4	accept
Triangular(38.1, 54.4, 43)	56.7	accept

Gambar H.6 *Fitting distribution stasiun kerja 3 untuk Production rate 70*

descriptive statistics		
	data points	60
	minimum	40.6601
	maximum	57.7567
	mean	47.7937
	median	47.7817
	mode	48.17
	standard deviation	3.57111
	variance	12.7528
	coefficient of variation	7.47193
	skewness	0.130603
	kurtosis	-0.376923
Auto::Fit Distributions		
distribution	rank	acceptance
Gamma(2.09, 190, 0.262)	99.8	accept
Inverse Gaussian(10.7, 1.60e+04, 58.6)	98.9	accept
Weibull(39, 2.71, 9.94)	98.9	accept
Erlang(-2.42, 201, 0.25)	98.8	accept
Normal(47.8, 3.54)	98.6	accept
Lognormal(12.8, 4.1, 0.0585)	98.2	accept
Log Logistic(104, 73.5, 152)	96	accept
Pearson 5(14.7, 85.6, 2.8e+03)	91.5	accept
Logistic(47.8, 2.07)	88.3	accept
Beta(40.7, 57.8, 2.33, 3.36)	82.1	accept
Pearson 6(40.7, 324, 3.37, 151)	50.8	accept

Gambar H.7 *Fitting distribution stasiun kerja 4 untuk Production rate 70*

descriptive statistics		
	data points	79
	minimum	21.0408
	maximum	39.1627
	mean	29.0937
	median	29.2224
	mode	29.558
	standard deviation	3.87401
	variance	15.008
	coefficient of variation	13.3156
	skewness	0.124332
	kurtosis	-0.290388

Auto::Fit Distributions		
distribution	rank	acceptance
Inverse Gaussian[-45.1, 2.75e+04, 74.2]	100	accept
Normal[29.1, 3.85]	100	accept
Logistic[29.1, 2.2]	99.3	accept
Log-Logistic[-144, 78, 173]	98.9	accept
Gamma[-28, 210, 0.272]	96.9	accept
Erlang[25.4, 200, 0.273]	95.8	accept
Lognormal[-46.7, 4.33, 0.0508]	95.3	accept
Weibull[18.8, 2.92, 11.5]	93.8	accept
Beta[17.9, 44.5, 4.41, 6.1]	88.8	accept

Gambar H.8 *Fitting distribution stasiun kerja 1 untuk Production rate 86*

descriptive statistics	
data points	79
minimum	20.81
maximum	59.41
mean	35.2777
median	34.37
mode	33.67
standard deviation	7.76744
variance	60.3332
coefficient of variation	22.018
skewness	0.572102
kurtosis	0.445103

Auto::Fit Distributions		
distribution	rank	acceptance
Log-Logistic[-41, 17.5, 75.7]	100	accept
Lognormal[-0.148, 3.54, 0.217]	96	accept
Gamma[10.9, 9.96, 2.45]	95.1	accept
Inverse Gaussian[0.353, 706, 34.9]	90	accept
Pearson 5[-5.92, 29.1, 1.16e+03]	89.8	accept
Erlang[13.2, 8, 2.76]	88	accept
Weibull[19.7, 2.12, 17.6]	83.5	accept
Logistic[35, 4.3]	80.4	accept
Beta[14.1, 379, 6.9, 112]	70.7	accept
Normal[35.3, 7.72]	62.5	accept
Pearson 6[20.8, 2.7e+03, 3.37, 622]	61.9	accept

Gambar H.9 *Fitting distribution stasiun kerja 2 untuk Production rate 86*

descriptive statistics		
	data points	79
	minimum	27.87
	maximum	46.63
	mean	34.8187
	median	34.72
	mode	35.615
	standard deviation	3.77562
	variance	14.2553
	coefficient of variation	10.8437
	skewness	0.475751
	kurtosis	0.226016
Auto::Fit Distributions		
distribution	rank	acceptance
Log-logistic(12.7, 10.4, 21.0)	100	accept
Lognormal(13.2, 3.06, 0.173)	97.5	accept
Erlang(20.7, 14, 1.01)	96.6	accept
Gamma(20.5, 14.5, 0.99)	96.5	accept
Pearson 5(12.2, 37.4, 825)	95.3	accept
Weibull(26.8, 2.25, 9.03)	88.5	accept
Beta(23.2, 97.6, 7.92, 42.7)	86.2	accept
Logistic(34.7, 2.09)	77.9	accept
Normal(34.8, 3.75)	50.1	accept
Inverse Gaussian(13.4, 698, 21.5)	49.4	accept

Gambar H.10 *Fitting distribution stasiun kerja 3 untuk Production rate 86*

descriptive statistics	
data points	78
minimum	32.74
maximum	56.63
mean	43.9479
median	43.135
mode	45.835
standard deviation	4.55934
variance	20.7876
coefficient of variation	10.3744
skewness	0.206903
kurtosis	-0.162871

Auto::Fit Distributions

distribution	rank	acceptance
Erlang(3.75, 79, 0.509)	99.9	accept
Gamma(4.05, 76.3, 0.523)	99.9	accept
Lognormal(-16.5, 4.1, 0.0749)	99.6	accept
Weibull(30.5, 3.21, 15)	93.5	accept
Log-Logistic(-78.4, 47, 122)	86.4	accept
Beta(32.7, 56.6, 3.39, 3.84)	83.5	accept
Pearson 5(8.14, 62.2, 2.19e+03)	82.8	accept
Inverse Gaussian(-16.5, 1.08e+04, 60.4)	76.2	accept
Normal(43.9, 4.53)	65.7	accept
Pearson 6(32.7, 69.9, 6.62, 41.7)	63.8	accept

Gambar 11.11 *Fitting distribution stasiun kerja 4 untuk Production rate 86*

descriptive statistics

data points	79
minimum	25.63
maximum	57.73
mean	37.7604
median	37.91
mode	38.03
standard deviation	6.26041
variance	39.1927
coefficient of variation	16.5793
skewness	0.708839
kurtosis	0.967199

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(7.09, 8.92, 30.1)	96.4	accept
Logistic(37.5, 3.42)	95.4	accept
Pearson 5(4.15, 30.5, 990)	88.2	accept
Lognormal(8.31, 3.36, 0.208)	86.5	accept
Erlang(17.2, 11, 1.86)	83.3	accept
Gamma(18.3, 9.78, 1.99)	82	accept
Weibull(24.5, 2.23, 15)	60.1	accept
Extreme Value(34.8, 5.29)	47.4	accept
Normal(37.8, 6.22)	37.3	accept
Beta(25.6, 57.7, 2.18, 3.57)	35.2	accept

Gambar 11.12 *Fitting distribution stasiun kerja 5 untuk Production rate 86*

Lampiran I

Tabel I.1 Proses pemilihan *production rate* dan pembentukan stasiun kerja.

<i>Production rate</i> 30 unit/jam		Wc : 117,6 detik	
Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1-12, 18-22	93.29	79.47%
2	13-17, 23-34	93.63	SI
Total keseluruhan (dalam detik)		186.92	34.14

<i>Production rate</i> 40 unit/jam		Wc : 88,2 detik	
Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1-9,11	63.36	70.64%
2	10, 12-25	63.85	SI
3	26-34	59.72	44.96
Total keseluruhan (dalam detik)		186.92	

<i>Production rate</i> 50		Wc : 70,65 detik	
Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1-9, 11	63.36	88%
2	10, 12-25	63.85	SI
3	26-34	59.72	14.8
Total keseluruhan (dalam detik)		186.92	

<i>Production rate</i> 60 unit/jam		Wc : 58.8 detik	
Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1-5,8, 11	46.25	79.47%
2	6-7,9-10,12-17	46.18	SI
3	18-28	45.01	24.37
4	29-34	49.48	
Total keseluruhan (dalam detik)		186.92	

<i>Production rate</i> 70 unit/jam		Wc : 50,4 detik	
Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1-5,8, 11	46.25	93%
2	6-7,9-10,12-17	46.18	SI
3	18-28	45.01	8.06
4	29-34	49.48	
Total keseluruhan (dalam detik)		186.92	

Production rate 86 unit/jam

Wc : 41 detik

Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1,4-5,8,11	36.38	91%
2	2-3,6-7,9-10,12-13	40.16	SI
3	14-21	35.4	7.79
4	22-30	38.29	
5	31-34	36.68	
Total keseluruhan (dalam detik)		186.92	

Production rate 80 unit/jam

Wc : 44,1 detik

Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1,4-5,8,11	36.38	84.77%
2	2-3,6-7,9-10,12-13	40.16	SI
3	14-21	35.40	7.79
4	22-30	38.29	
5	31-34	36.68	
Total keseluruhan (dalam detik)		186.92	

Production rate 90 unit/jam

Wc : 39,2 detik

Stasiun kerja	Elemen	Total	Efisien Lintasan
1	1,4-5,8,11	36.38	79.47%
2	2-3,6-7,9-10,12	34.60	SI
3	13-20	35.64	11.77
4	21-29	34.07	
5	30-33	30.09	
6	34	16.14	
Total keseluruhan (dalam detik)		186.92	

PEMERINTAHAN
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