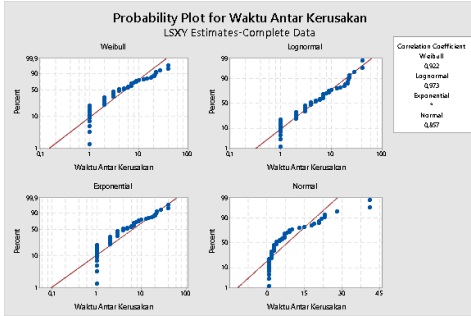


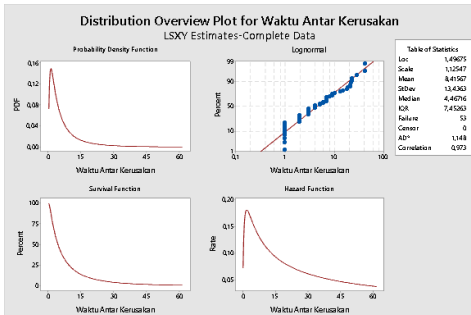
# LAMPIRAN

Lampiran 1 Hasil uji distribusi dan parameter data TTF & TTR komponen cutter.



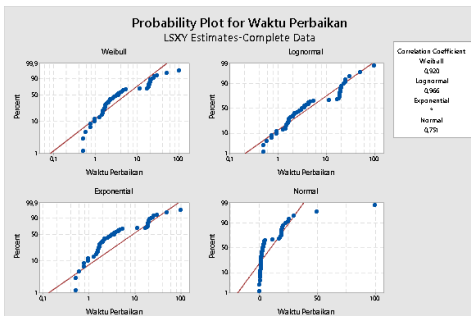
## Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	3,581	0,922
Lognormal	1,148	0,973
Exponential	2,430	*
Normal	5,588	0,857



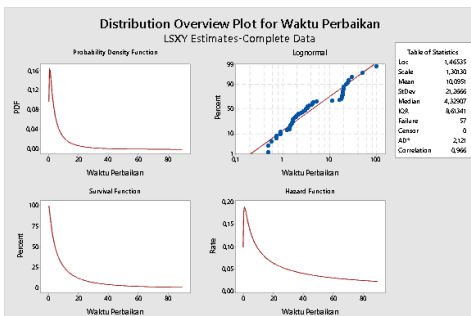
## Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Lognormal	1,148	0,973



## Goodness-of-Fit

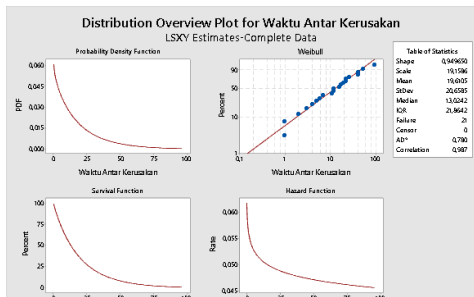
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	5,847	0,920
Lognormal	2,121	0,966
Exponential	8,560	*
Normal	7,190	0,751



## Goodness-of-Fit

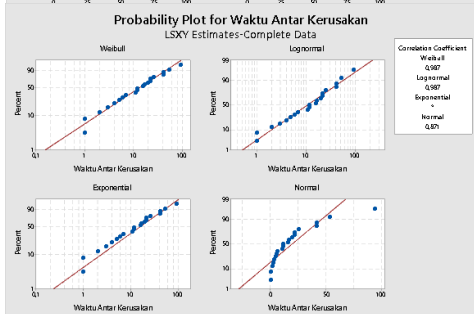
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Lognormal	2,121	0,966

Lampiran 2 Hasil uji distribusi dan parameter data TTF & TTR komponen Gearbox.



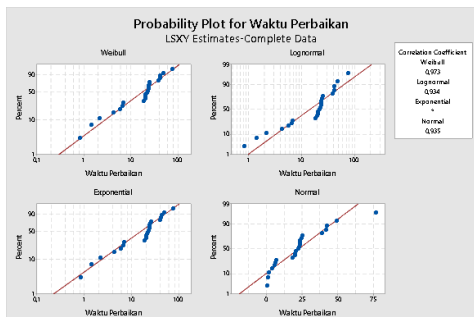
Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	0,780	0,987
Lognormal	0,798	0,987
Exponential	0,801	*
Normal	2,113	0,871



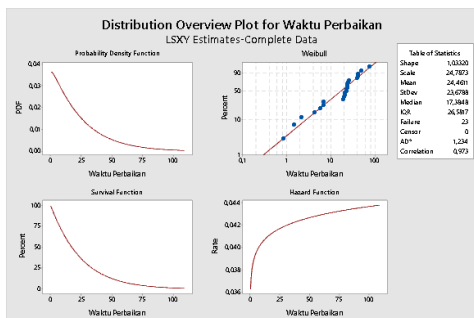
Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	0,780	0,987



Goodness-of-Fit

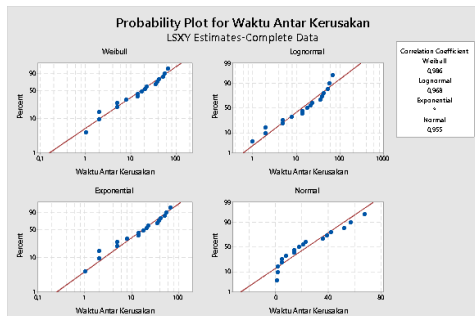
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	1,234	0,973
Lognormal	1,806	0,934
Exponential	1,681	*
Normal	1,420	0,935



Goodness-of-Fit

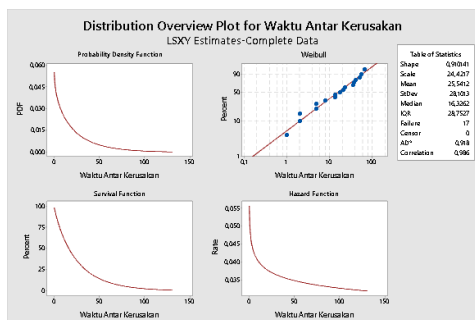
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	1,234	0,973

Lampiran 3 Hasil uji distribusi dan parameter data TTF & TTR komponen Sander.



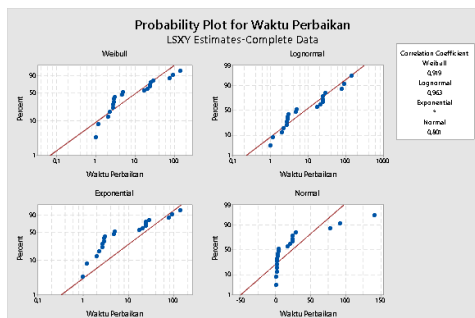
Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	0,918	0,986
Lognormal	1,124	0,968
Exponential	0,959	*
Normal	1,280	0,955



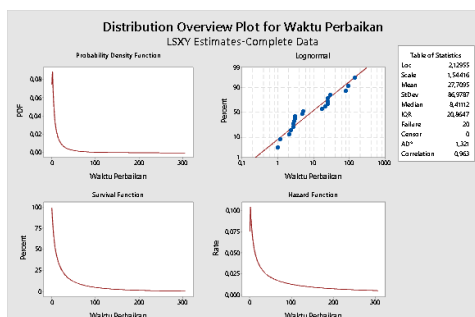
Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	0,918	0,986



Goodness-of-Fit

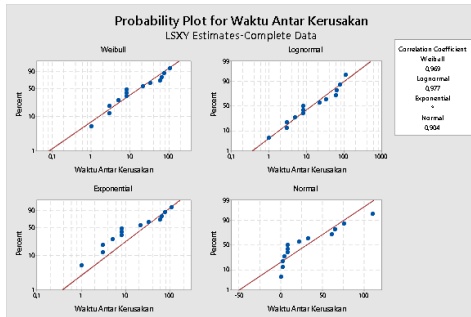
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	2,345	0,919
Lognormal	1,321	0,963
Exponential	4,808	*
Normal	3,681	0,801



Goodness-of-Fit

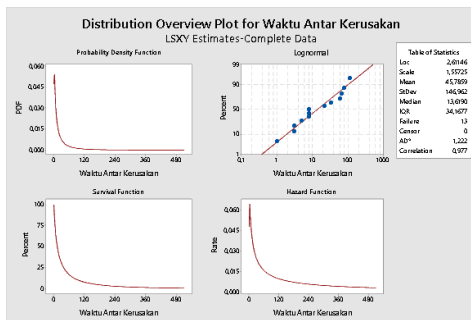
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Lognormal	1,321	0,963

Lampiran 4 Hasil uji distribusi dan parameter data TTF & TTR komponen Welding.



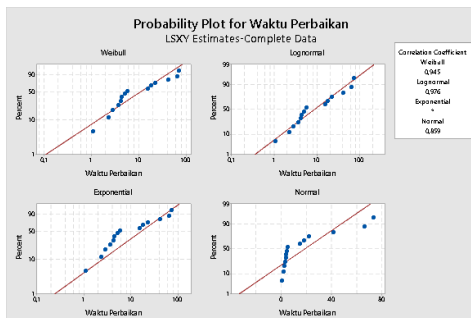
Goodness-of-Fit

Distribution	Anderson-Darling Correlation (adj)	Coefficient
Weibull	1,409	0,969
Lognormal	1,222	0,977
Exponential	1,826	*
Normal	1,943	0,904



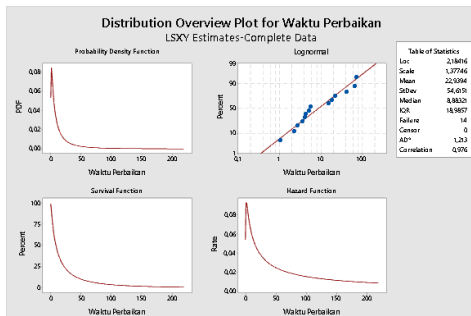
Goodness-of-Fit

Distribution	Anderson-Darling Correlation (adj)	Coefficient
Lognormal	1,222	0,977



Goodness-of-Fit

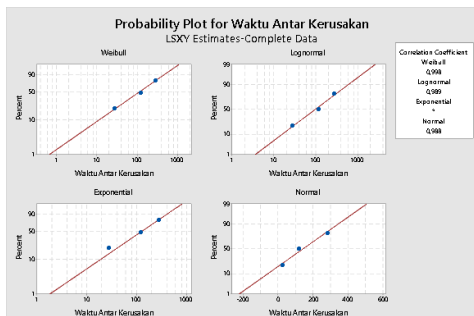
Distribution	Anderson-Darling Correlation (adj)	Coefficient
Weibull	1,798	0,945
Lognormal	1,213	0,976
Exponential	2,061	*
Normal	2,525	0,859



Goodness-of-Fit

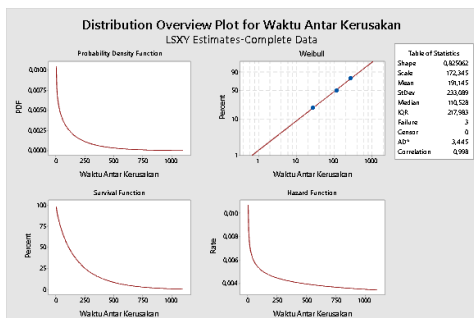
Distribution	Anderson-Darling Correlation (adj)	Coefficient
Lognormal	1,213	0,976

Lampiran 5 Hasil uji distribusi dan parameter data TTF & TTR komponen As Cutter.



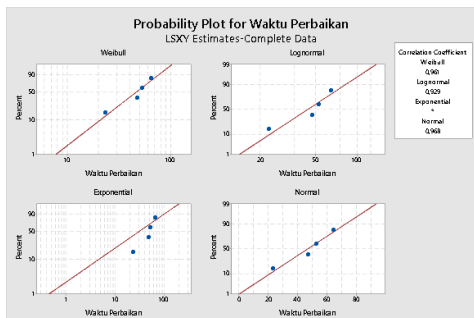
Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	3,445	0,998
Lognormal	3,467	0,989
Exponential	3,402	*
Normal	3,446	0,988



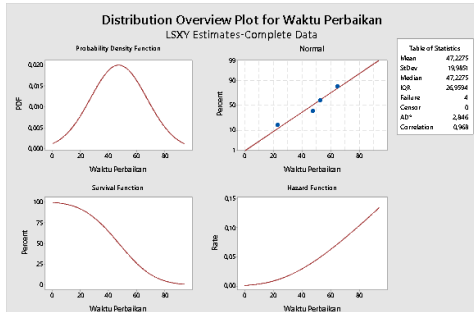
Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	3,445	0,998



Goodness-of-Fit

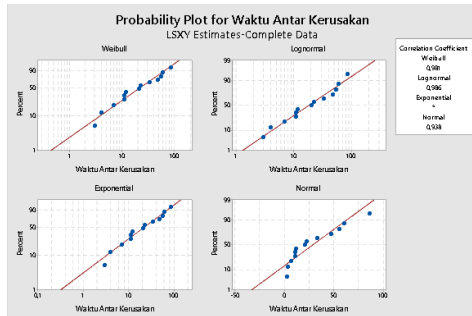
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	2,854	0,961
Lognormal	2,947	0,929
Exponential	3,678	*
Normal	2,846	0,968



Goodness-of-Fit

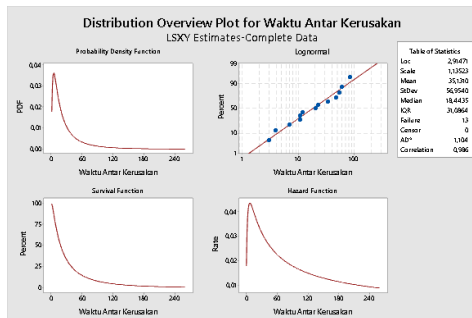
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Normal	2,846	0,968

## Lampiran 6 Hasil uji distribusi dan parameter data TTF & TTR komponen Water Pump.



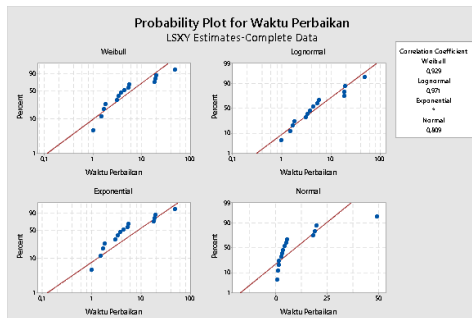
### Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	1,180	0,981
Lognormal	1,104	0,986
Exponential	1,102	*
Normal	1,527	0,938



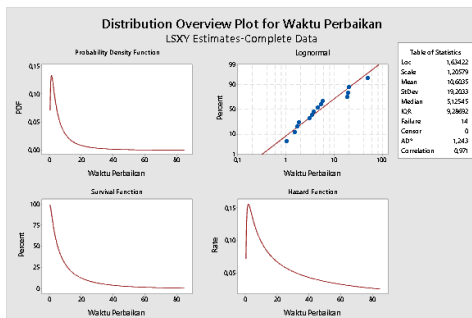
### Goodness-of-Fit

Distribution	Anderson-Darling (adj)	Correlation Coefficient
Lognormal	1,104	0,986



### Goodness-of-Fit

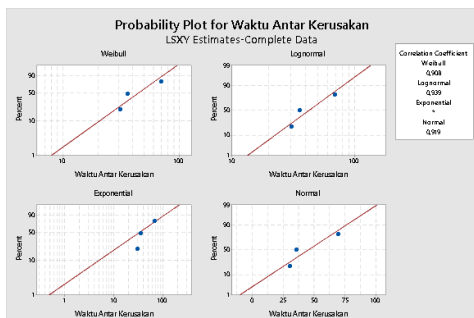
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Weibull	2,121	0,929
Lognormal	1,243	0,971
Exponential	1,931	*
Normal	2,772	0,809



### Goodness-of-Fit

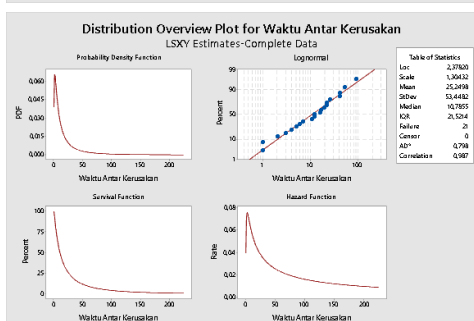
Distribution	Anderson-Darling (adj)	Correlation Coefficient
Lognormal	1,243	0,971

Lampiran 7 Hasil uji distribusi dan parameter data TTF & TTR komponen Hower.



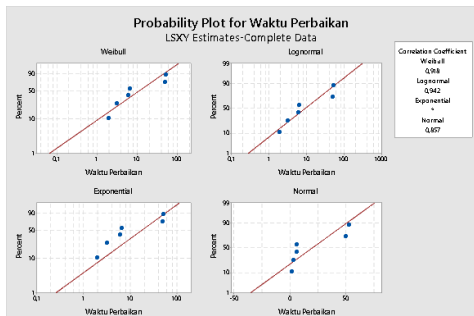
Goodness-of-Fit

Distribution	Anderson-Darling	Correlation (adj)	Coefficient
Weibull	3,621	0,908	
Lognormal	3,504	0,939	
Exponential	3,818	*	
Normal	3,533	0,919	



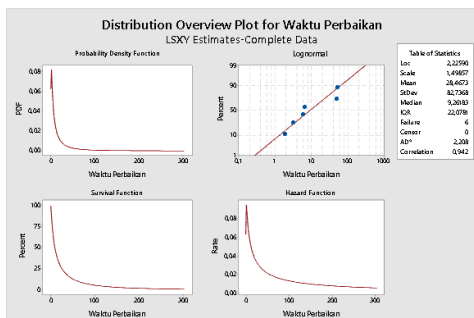
Goodness-of-Fit

Distribution	Anderson-Darling	Correlation (adj)	Coefficient
Lognormal	0,798	0,987	



Goodness-of-Fit

Distribution	Anderson-Darling	Correlation (adj)	Coefficient
Weibull	2,517	0,918	
Lognormal	2,208	0,942	
Exponential	2,538	*	
Normal	2,651	0,857	



Goodness-of-Fit

Distribution	Anderson-Darling	Correlation (adj)	Coefficient
Lognormal	2,208	0,942	

## Lampiran 8 Perhitungan MTTF komponen kritis.

1. MTTF komponen cutter

$$\begin{aligned} \text{MTTF} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 4,329 \cdot e \left( \frac{1,301^2}{2} \right) \\ &= 25,238 = 25 \text{ hari} \end{aligned}$$

7. MTTF komponen Hower

$$\begin{aligned} \text{MTTF} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 10,785 \cdot e \left( \frac{1,304^2}{2} \right) \\ &= 10,087 = 10 \text{ hari} \end{aligned}$$

2. MTTF komponen Gearbox

$$\begin{aligned} \text{MTTF} &= \theta \cdot \Gamma \left( 1 + \frac{1}{\beta} \right) \\ &= 19,158 \cdot \Gamma \left( 1 + \frac{1}{0,949} \right) \\ &= 19,158 \cdot (1,02218) \\ &= 19,58 = 19 \text{ hari} \end{aligned}$$

3. MTTF komponen Sander

$$\begin{aligned} \text{MTTF} &= \theta \cdot \Gamma \left( 1 + \frac{1}{\beta} \right) \\ &= 24,421 \cdot \Gamma \left( 1 + \frac{1}{0,91} \right) \\ &= 24,421 \cdot (1,04145) \\ &= 25,432 = 25 \text{ hari} \end{aligned}$$

4. MTTF komponen As cutter

$$\begin{aligned} \text{MTTF} &= \theta \cdot \Gamma \left( 1 + \frac{1}{\beta} \right) \\ &= 172,45 \cdot \Gamma \left( 1 + \frac{1}{0,825} \right) \\ &= 172,45 \cdot (1,10785) \\ &= 191,048 = 191 \text{ hari} \end{aligned}$$

5. MTTF komponen Welding

$$\begin{aligned} \text{MTTF} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 13,619 \cdot e \left( \frac{1,557^2}{2} \right) \\ &= 45,768 = 45 \text{ hari} \end{aligned}$$

6. MTTF komponen Water Pump

$$\begin{aligned} \text{MTTF} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 18,443 \cdot e \left( \frac{1,135^2}{2} \right) \\ &= 35,120 = 35 \text{ hari} \end{aligned}$$



Lampiran 9 Perhitungan MTTR komponen kritis.

1. MTTR komponen Cutter

$$\begin{aligned} \text{MTTR} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 4,329 \cdot e \left( \frac{1,301^2}{2} \right) \\ &= 10,090 \text{ jam} = 0,42 \text{ hari} \end{aligned}$$

2. MTTR komponen Gearbox

$$\begin{aligned} \text{MTTR} &= \theta \cdot \Gamma \left( 1 + \frac{1}{\beta} \right) \\ &= 24,787 \cdot \Gamma \left( 1 + \frac{1}{1,033} \right) \\ &= 24,787 \cdot (0,98374) \\ &= 24,383 \text{ jam} = 1,01 \text{ hari} \end{aligned}$$

3. MTTR komponen Sander

$$\begin{aligned} \text{MTTR} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 8,411 \cdot e \left( \frac{1,544^2}{2} \right) \\ &= 27,702 \text{ jam} = 1,15 \text{ hari} \end{aligned}$$

4. MTTR komponen As Cutter

$$\begin{aligned} \text{MTTR} &= \mu \\ \mu &= 47,227 \text{ jam} = 1,96 \text{ hari} \end{aligned}$$

5. MTTR komponen Welding

$$\begin{aligned} \text{MTTR} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 8,883 \cdot e \left( \frac{1,377^2}{2} \right) \\ &= 22,924 \text{ jam} = 0,95 \text{ hari} \end{aligned}$$

6. MTTR komponen Water Pump

$$\begin{aligned} \text{MTTR} &= t_{med} \cdot e \left( \frac{s^2}{2} \right) \\ &= 5,125 \cdot e \left( \frac{1,205^2}{2} \right) \\ &= 10,592 \text{ jam} = 0,44 \text{ hari} \end{aligned}$$

7. MTTR komponen Hower

$$\text{MTTR} = t_{med} \cdot e \left( \frac{s^2}{2} \right)$$

$$\begin{aligned} &= 9,261 \cdot e^{\left(\frac{1,498^2}{2}\right)} \\ &= 28,440 \text{ Jam} = 1,18 \text{ hari} \end{aligned}$$

## Lampiran 10 Perhitungan Reliability Komponen Kritis

1. Reliability komponen Cutter

$$\begin{aligned}
 R(t) &= 1 - \Phi \left[ \frac{1}{s} \ln \left( \frac{t}{t_{med}} \right) \right] \\
 &= 1 - \Phi \left[ \frac{1}{1,125} \ln \left( \frac{10}{4,467} \right) \right] \\
 &= 1 - \Phi(0,716) \\
 &= 1 - (0,761148) \\
 &= 0,23 = 23 \%
 \end{aligned}$$

2. Reliability komponen Gearbox

$$\begin{aligned}
 R(t) &= e \left[ - \left( \frac{t}{\theta} \right) \right]^\beta \\
 &= e \left[ - \left( \frac{19}{19,158} \right) \right]^{0,949} \\
 &= 0,370 = 37\%
 \end{aligned}$$

3. Reliability komponen Sander

$$\begin{aligned}
 R(t) &= e \left[ - \left( \frac{t}{\theta} \right) \right]^\beta \\
 &= e \left[ - \left( \frac{25}{24,421} \right) \right]^{0,91} \\
 &= 0,360 = 36\%
 \end{aligned}$$

4. Reliability komponen As Cutter

$$\begin{aligned}
 R(t) &= e \left[ - \left( \frac{t}{\theta} \right) \right]^\beta \\
 &= e \left[ - \left( \frac{191}{172,345} \right) \right]^{0,825} \\
 &= 0,336 = 33\%
 \end{aligned}$$

5. Reliability komponen Welding

$$\begin{aligned}
 R(t) &= 1 - \Phi \left[ \frac{1}{s} \ln \left( \frac{t}{t_{med}} \right) \right] \\
 &= 1 - \Phi \left[ \frac{1}{1,557} \ln \left( \frac{45}{13,419} \right) \right] \\
 &= 1 - \Phi(0,777) \\
 &= 1 - (0,7793501) \\
 &= 0,220 = 22 \%
 \end{aligned}$$

## 6. Reliability komponen Water Pump

$$\begin{aligned}R(t) &= 1 - \Phi \left[ \frac{1}{s} \ln \left( \frac{t}{t_{med}} \right) \right] \\&= 1 - \Phi \left[ \frac{1}{1,135} \ln \left( \frac{35}{18,443} \right) \right] \\&= 1 - \Phi(0,564) \\&= 1 - (0,7122603) \\&= 0,28 = 28 \%\end{aligned}$$

## 7. Reliability komponen Hower

$$\begin{aligned}R(t) &= 1 - \Phi \left[ \frac{1}{s} \ln \left( \frac{t}{t_{med}} \right) \right] \\&= 1 - \Phi \left[ \frac{1}{1,304} \ln \left( \frac{28}{10,785} \right) \right] \\&= 1 - \Phi(0,731) \\&= 1 - (0,767305) \\&= 0,23 = 23 \%\end{aligned}$$

### Lampiran 11 Perhitungan Availability Komponen Kritis

1. Availability komponen Cutter

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{10}{10+0,42} = 95,96\%$$

2. Availability komponen Gearbox

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{19}{19+1,01} = 94,95\%$$

3. Availability komponen Sander

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{25}{25+1,15} = 95,60\%$$

4. Availability komponen As Cutter

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{191}{191+1,96} = 98,98\%$$

5. Availability komponen Welding

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{45}{45+0,95} = 97,93\%$$

6. Availability komponen Water Pump

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{35}{35+0,44} = 98,75\%$$

7. Availability komponen Hower

$$Availability = \frac{MTTF}{MTTF+MTTR} = \frac{25}{25+1,18} = 95,49\%$$

Lampiran 12 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Abrasive

1. TTF

No.	TTF	No.	TTF	No	TTF
1	1,24	51	3,33	101	11,16
2	2,31	52	12,51	102	14,88
3	1,53	53	4,04	103	53,51
4	0,17	54	33,86	104	4,07
5	2,23	55	44,21	105	3,79
6	6,86	56	53,01	106	2,96
7	11,41	57	13,54	107	9,15
8	8,58	58	30,04	108	4,51
9	0,30	59	4,91	109	13,20
10	18,48	60	4,81	110	7,85
11	12,21	61	4,11	111	5,57
12	29,86	62	2,52	112	5,94
13	13,43	63	4,00	113	7,67
14	19,67	64	0,29	114	11,96
15	2,84	65	12,89	115	6,04
16	3,67	66	1,06	116	5,03
17	11,11	67	11,45	117	36,39
18	19,81	68	8,05	118	3,47
19	3,10	69	19,85	119	5,77
20	18,78	70	0,60	120	35,21
21	11,49	71	19,81	121	8,38
22	2,01	72	18,64	122	23,41
23	12,42	73	10,88	123	5,56
24	5,97	74	35,73	124	5,48
25	3,65	75	12,48	125	1,94
26	5,28	76	15,18	126	5,46
27	19,96	77	5,64	127	6,13
28	24,49	78	6,52	128	0,50
29	4,02	79	28,48	129	2,12

No.	TTF	No.	TTF	No	TTF
30	18,28	80	0,80	130	2,00
31	0,78	81	9,10	131	7,03
32	3,99	82	1,90	132	17,42
33	4,07	83	15,54	133	0,24
34	24,89	84	0,28	134	11,49
35	2,94	85	40,95	135	0,09
36	7,46	86	0,76	136	9,05
37	23,53	87	0,52	137	19,13
38	4,03	88	12,74	138	6,33
39	7,47	89	16,59	139	1,52
40	11,35	90	3,70	140	13,28
41	1,10	91	2,26	141	3,13
42	12,27	92	2,23	142	17,44
43	14,46	93	17,62	143	0,83
44	0,09	94	0,57	144	10,52
45	37,01	95	1,81	145	8,72
46	0,02	96	18,52	146	5,60
47	1,93	97	14,25	147	38,18
48	22,74	98	29,13	148	1,54
49	17,14	99	4,72	149	26,44
50	0,25	100	24,48	150	15,10

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	15,68	51	17,20	101	21,02
2	16,52	52	21,42	102	22,01
3	15,87	53	17,60	103	20,72
4	14,78	54	23,99	104	17,62
5	16,43	55	24,17	105	17,50
6	19,30	56	24,26	106	16,91

NO	TTR	NO	TTR	NO	TTR
7	21,12	57	21,72	107	20,32
8	20,11	58	23,81	108	17,89
9	14,96	59	18,19	109	21,62
10	22,69	60	17,15	110	19,71
11	21,42	61	17,69	111	18,59
12	23,81	62	16,62	112	18,80
13	21,66	63	17,60	113	19,61
14	22,88	64	14,87	114	21,32
15	16,81	65	21,52	115	18,29
16	17,40	66	15,50	116	18,29
17	21,02	67	21,12	117	23,99
18	22,98	68	19,81	118	17,30
19	17,01	69	22,88	119	18,69
20	22,79	70	15,14	120	23,99
21	21,12	71	22,88	121	19,91
22	16,24	72	22,79	122	23,47
23	21,42	73	20,92	123	18,59
24	18,80	74	23,99	124	18,49
25	17,40	75	21,52	125	16,15
26	18,39	76	22,21	126	18,49
27	22,98	77	18,59	127	18,90
28	23,45	78	19,10	128	15,05
29	17,60	79	23,72	129	16,33
30	22,69	80	15,32	130	16,24
31	15,32	81	20,32	131	19,30
32	17,60	82	16,15	132	22,50
33	17,69	83	22,21	133	14,87
34	23,45	84	14,87	134	21,12
35	16,91	85	24,08	135	14,70
36	19,61	86	15,23	136	20,21
37	23,35	87	15,14	137	22,88
38	17,60	88	21,52	138	19,00
39	19,61	89	22,41	139	15,87



NO	TTR	NO	TTR	NO	TTR
40	21,12	90	17,40	140	21,62
41	15,50	91	16,43	141	17,01
42	21,42	92	16,43	142	22,60
43	22,01	93	22,60	143	15,32
44	14,70	94	15,14	144	20,82
45	24,08	95	16,05	145	20,11
46	14,70	96	22,69	146	18,59
47	16,15	97	21,92	147	24,08
48	23,26	98	23,72	148	15,87
49	22,50	99	18,09	149	23,54
50	14,87	100	23,45	150	22,11

Lampiran 13 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Gearbox

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	2,02	51	5,71	101	20,44
2	3,89	52	23,05	102	27,69
3	2,52	53	7,01	103	106,63
4	0,25	54	65,83	104	7,06
5	3,74	55	87,20	105	6,55
6	12,24	56	105,58	106	5,05
7	20,93	57	25,05	107	16,58
8	15,49	58	58,04	108	7,87
9	0,45	59	8,60	109	24,39
10	34,79	60	8,42	110	14,10
11	22,48	61	7,13	111	9,83
12	57,67	62	4,27	112	10,51
13	24,85	63	6,94	113	13,76
14	37,14	64	21,98	114	21,98
15	4,83	65	10,70	115	10,70
16	6,32	66	8,83	116	8,83
17	20,35	67	71,02	117	71,02
18	37,42	68	5,97	118	5,97
19	5,31	69	10,19	119	10,19
20	35,38	70	68,60	120	68,60
21	21,07	71	15,11	121	15,11
22	3,36	72	44,63	122	44,63
23	22,89	73	9,82	123	9,82
24	10,58	74	9,67	124	9,67
25	6,29	75	3,24	125	3,24
26	9,30	76	9,62	126	9,62
27	37,73	77	10,88	127	10,88
28	46,80	78	0,77	128	0,77

NO	TTF	NO	TTF	NO	TTF
29	6,97	79	3,55	129	3,55
30	34,38	80	3,34	130	3,34
31	1,24	81	12,55	131	12,55
32	6,92	82	32,67	132	32,67
33	7,06	83	0,36	133	0,36
34	47,60	84	21,08	134	21,08
35	5,02	85	0,13	135	0,13
36	13,36	86	16,39	136	16,39
37	44,87	87	36,08	137	36,08
38	6,99	88	11,24	138	11,24
39	13,38	89	2,51	139	2,51
40	20,81	90	24,55	140	24,55
41	1,78	91	5,35	141	5,35
42	22,60	92	32,72	142	32,72
43	26,85	93	1,33	143	1,33
44	0,13	94	19,22	144	19,22
45	72,30	95	15,77	145	15,77
46	0,03	96	9,88	146	9,88
47	3,22	97	74,71	147	74,71
48	43,28	98	2,54	148	2,54
49	32,13	99	50,73	149	50,73
50	0,37	100	28,11	150	28,11

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	3,14	51	8,16	101	26,31
2	5,72	52	29,38	102	34,77
3	3,84	53	9,85	103	119,99
4	0,46	54	77,04	104	9,91
5	5,52	55	99,74	105	9,25
6	16,43	56	118,90	106	7,28

NO	TTR	NO	TTR	NO	TTR
7	26,88	57	31,71	107	21,70
8	20,40	58	68,62	108	10,94
9	0,80	59	11,88	109	30,95
10	42,88	60	11,65	110	18,71
11	28,71	61	9,99	111	13,42
12	68,22	62	6,24	112	14,28
13	31,47	63	9,75	113	18,29
14	45,53	64	0,77	114	28,13
15	6,99	65	30,25	115	14,51
16	8,95	66	2,68	116	12,17
17	26,20	67	26,97	117	82,60
18	45,85	68	19,17	118	8,49
19	7,62	69	45,95	119	13,88
20	43,55	70	1,56	120	80,01
21	27,05	71	45,85	121	19,93
22	5,01	72	43,22	122	53,90
23	29,19	73	25,68	123	13,41
24	14,36	74	81,16	124	13,22
25	8,91	75	29,32	125	4,85
26	12,76	76	35,43	126	13,16
27	46,20	77	13,59	127	14,74
28	56,31	78	15,64	128	1,30
29	9,80	79	65,15	129	5,27
30	42,42	80	2,06	130	4,98
31	2,00	81	21,60	131	16,81
32	9,72	82	4,74	132	40,48
33	9,91	83	36,24	133	0,64
34	57,19	84	0,75	134	27,06
35	7,24	85	92,60	135	0,25
36	17,80	86	1,95	136	21,48
37	54,17	87	1,36	137	44,33
38	9,82	88	29,91	138	15,19
39	17,83	89	38,62	139	3,83

NO	TTR	NO	TTR	NO	TTR
40	26,75	90	9,02	140	31,12
41	2,80	91	5,60	141	7,68
42	28,85	92	5,53	142	40,53
43	33,80	93	40,94	143	2,14
44	0,25	94	1,48	144	24,86
45	83,97	95	4,52	145	20,73
46	0,06	96	42,96	146	13,49
47	4,82	97	33,33	147	86,53
48	52,41	98	66,60	148	3,87
49	39,85	99	11,44	149	60,63
50	0,67	100	56,29	150	35,25

Lampiran 14 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Sander

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	2,34	51	6,91	101	26,13
2	4,63	52	29,62	102	35,86
3	2,94	53	8,56	103	146,31
4	0,26	54	88,47	104	8,63
5	4,44	55	118,62	105	7,98
6	15,31	56	144,79	106	6,08
7	26,78	57	32,30	107	21,00
8	19,57	58	77,58	108	9,65
9	0,49	59	10,59	109	31,42
10	45,49	60	10,36	110	17,74
11	28,85	61	8,71	111	12,17
12	77,06	62	5,10	112	13,06
13	32,03	63	8,46	113	17,30
14	48,70	64	0,48	114	28,19
15	5,80	65	30,61	115	13,30
16	7,69	66	1,96	116	10,89
17	26,01	67	26,88	117	95,76
18	49,09	68	18,24	118	7,24
19	6,40	69	49,21	119	12,65
20	46,30	70	1,06	120	92,36
21	26,97	71	49,09	121	19,07
22	3,98	72	45,91	122	58,99
23	29,40	73	25,42	123	12,16
24	13,14	74	93,87	124	11,97
25	7,65	75	29,55	125	3,83
26	11,49	76	36,64	126	11,90
27	49,51	77	12,34	127	13,54
28	61,98	78	14,48	128	0,86
29	8,51	79	73,14	129	4,21

NO	TTF	NO	TTF	NO	TTF
30	44,94	80	1,45	130	3,95
31	1,40	81	20,89	131	15,71
32	8,44	82	3,73	132	42,61
33	8,63	83	37,59	133	0,39
34	63,09	84	0,46	134	26,98
35	6,04	85	109,03	135	0,13
36	16,77	86	1,37	136	20,76
37	59,32	87	0,91	137	47,25
38	8,54	88	30,23	138	14,01
39	16,80	89	40,39	139	2,93
40	26,62	90	7,76	140	31,62
41	2,05	91	4,51	141	6,46
42	29,01	92	4,45	142	42,67
43	34,72	93	43,17	143	1,51
44	0,13	94	1,00	144	24,50
45	97,56	95	3,54	145	19,93
46	0,03	96	45,59	146	12,25
47	3,80	97	34,18	147	100,95
48	57,13	98	74,99	148	2,97
49	41,87	99	10,15	149	67,42
50	0,40	100	61,95	150	36,43

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	19,47	51	21,45	101	26,45
2	20,57	52	26,98	102	27,76
3	19,71	53	21,96	103	26,06
4	18,31	54	30,36	104	21,99
5	20,45	55	30,60	105	21,84
6	24,19	56	30,72	106	21,07
7	26,58	57	27,37	107	25,53
8	25,26	58	30,12	108	22,35
9	18,54	59	22,74	109	27,24

NO	TTR	NO	TTR	NO	TTR
10	28,65	60	21,39	110	24,73
11	26,98	61	22,09	111	23,27
12	30,12	62	20,69	112	23,53
13	27,29	63	21,96	113	24,59
14	28,90	64	18,43	114	26,85
15	20,94	65	27,11	115	22,88
16	21,71	66	19,24	116	22,88
17	26,45	67	26,58	117	30,36
18	29,03	68	24,86	118	21,58
19	21,20	69	28,90	119	23,40
20	28,78	70	18,77	120	30,36
21	26,58	71	28,90	121	25,00
22	20,20	72	28,78	122	29,68
23	26,98	73	26,32	123	23,27
24	23,53	74	30,36	124	23,14
25	21,71	75	27,11	125	20,08
26	23,01	76	28,02	126	23,14
27	29,03	77	23,27	127	23,67
28	29,64	78	23,93	128	18,65
29	21,96	79	30,01	129	20,32
30	28,65	80	19,00	130	20,20
31	19,00	81	25,53	131	24,19
32	21,96	82	20,08	132	28,40
33	22,09	83	28,02	133	18,43
34	29,64	84	18,43	134	26,58
35	21,07	85	30,48	135	18,20
36	24,59	86	18,89	136	25,39
37	29,52	87	18,77	137	28,90
38	21,96	88	27,11	138	23,80
39	24,59	89	28,27	139	19,71
40	26,58	90	21,71	140	27,24
41	19,24	91	20,45	141	21,20
42	26,98	92	20,45	142	28,53



NO	TTR	NO	TTR	NO	TTR
43	27,76	93	28,53	143	19,00
44	18,20	94	18,77	144	26,19
45	30,48	95	19,96	145	25,26
46	18,20	96	28,65	146	23,27
47	20,08	97	27,63	147	30,48
48	29,40	98	30,01	148	19,71
49	28,40	99	22,61	149	29,76
50	18,43	100	29,64	150	27,89

Lampiran 15 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Cutter

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	8,23	51	8,84	101	10,29
2	8,57	52	10,44	102	10,66
3	8,31	53	8,99	103	10,18
4	7,87	54	11,38	104	9,00
5	8,53	55	11,45	105	8,95
6	9,65	56	11,48	106	8,72
7	10,33	57	10,55	107	10,03
8	9,95	58	11,32	108	9,11
9	7,95	59	9,22	109	10,52
10	10,91	60	8,82	110	9,80
11	10,44	61	9,03	111	9,38
12	11,32	62	8,61	112	9,45
13	10,53	63	8,99	113	9,76
14	10,98	64	7,91	114	10,41
15	8,68	65	10,48	115	9,26
16	8,91	66	8,16	116	9,26
17	10,29	67	10,33	117	11,38
18	11,02	68	9,84	118	8,87
19	8,76	69	10,98	119	9,41
20	10,95	70	8,02	120	11,38
21	10,33	71	10,98	121	9,88
22	8,46	72	10,95	122	11,20
23	10,44	73	10,26	123	9,38
24	9,45	74	11,38	124	9,34
25	8,91	75	10,48	125	8,42
26	9,30	76	10,73	126	9,34
27	11,02	77	9,38	127	9,49
28	11,19	78	9,57	128	7,98
29	8,99	79	11,29	129	8,50

NO	TTF	NO	TTF	NO	TTF
30	10,91	80	8,09	130	8,46
31	8,09	81	10,03	131	9,65
32	8,99	82	8,42	132	10,84
33	9,03	83	10,73	133	7,91
34	11,19	84	7,91	134	10,33
35	8,72	85	11,41	135	7,84
36	9,76	86	8,05	136	9,99
37	11,15	87	8,02	137	10,98
38	8,99	88	10,48	138	9,53
39	9,76	89	10,81	139	8,31
40	10,33	90	8,91	140	10,52
41	8,16	91	8,53	141	8,76
42	10,44	92	8,53	142	10,88
43	10,66	93	10,88	143	8,09
44	7,84	94	8,02	144	10,22
45	11,41	95	8,38	145	9,95
46	7,84	96	10,91	146	9,38
47	8,42	97	10,63	147	11,41
48	11,12	98	11,29	148	8,31
49	10,84	99	9,18	149	11,22
50	7,91	100	11,19	150	10,70

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	6,75	51	7,33	101	8,74
2	7,07	52	8,89	102	9,10
3	6,82	53	7,47	103	8,63
4	6,41	54	9,82	104	7,48
5	7,04	55	9,88	105	7,44
6	8,11	56	9,92	106	7,22
7	8,78	57	9,00	107	8,48
8	8,41	58	9,75	108	7,59
9	6,48	59	7,70	109	8,96

NO	TTR	NO	TTR	NO	TTR
10	9,35	60	7,31	110	8,26
11	8,89	61	7,51	111	7,85
12	9,75	62	7,11	112	7,92
13	8,98	63	7,47	113	8,22
14	9,42	64	6,45	114	8,85
15	7,18	65	8,92	115	7,73
16	7,40	66	6,68	116	7,73
17	8,74	67	8,78	117	9,82
18	9,45	68	8,30	118	7,36
19	7,25	69	9,42	119	7,88
20	9,39	70	6,55	120	9,82
21	8,78	71	9,42	121	8,33
22	6,96	72	9,39	122	9,63
23	8,89	73	8,71	123	7,85
24	7,92	74	9,82	124	7,81
25	7,40	75	8,92	125	6,93
26	7,77	76	9,18	126	7,81
27	9,45	77	7,85	127	7,96
28	9,62	78	8,03	128	6,51
29	7,47	79	9,72	129	7,00
30	9,35	80	6,62	130	6,96
31	6,62	81	8,48	131	8,11
32	7,47	82	6,93	132	9,28
33	7,51	83	9,18	133	6,45
34	9,62	84	6,45	134	8,78
35	7,22	85	9,85	135	6,38
36	8,22	86	6,58	136	8,45
37	9,59	87	6,55	137	9,42
38	7,47	88	8,92	138	8,00
39	8,22	89	9,25	139	6,82
40	8,78	90	7,40	140	8,96
41	6,68	91	7,04	141	7,25
42	8,89	92	7,04	142	9,32

NO	TTR	NO	TTR	NO	TTR
43	9,10	93	9,32	143	6,62
44	6,38	94	6,55	144	8,67
45	9,85	95	6,89	145	8,41
46	6,38	96	9,35	146	7,85
47	6,93	97	9,07	147	9,85
48	9,56	98	9,72	148	6,82
49	9,28	99	7,66	149	9,66
50	6,45	100	9,62	150	9,14

Lampiran 16 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen As Cutter

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	24,72	51	66,26	101	222,14
2	45,96	52	249,02	102	296,31
3	30,47	53	80,50	103	1065,29
4	3,39	54	674,01	104	81,03
5	44,30	55	880,14	105	75,47
6	136,57	56	1055,26	106	58,90
7	227,16	57	269,46	107	182,12
8	170,79	58	598,08	108	89,77
9	6,00	59	97,68	109	262,74
10	367,97	60	95,76	110	156,22
11	243,12	61	81,74	111	110,86
12	594,45	62	50,22	112	118,16
13	267,35	63	79,65	113	152,63
14	391,50	64	5,80	114	238,03
15	56,51	65	256,59	115	120,16
16	72,96	66	21,01	116	100,17
17	221,23	67	227,96	117	724,34
18	394,37	68	160,19	118	69,06
19	61,78	69	395,20	119	114,77
20	373,89	70	11,99	120	700,93
21	228,65	71	394,37	121	166,76
22	40,09	72	371,03	122	466,10
23	247,31	73	216,64	123	110,76
24	118,86	74	711,36	124	109,16
25	72,64	75	248,47	125	38,70
26	105,19	76	302,17	126	108,60
27	397,43	77	112,29	127	122,10
28	487,60	78	129,81	128	9,93
29	80,08	79	566,87	129	42,22

NO	TTF	NO	TTF	NO	TTF
30	363,87	80	16,02	130	39,78
31	15,52	81	181,22	131	139,85
32	79,43	82	37,82	132	346,71
33	81,03	83	309,30	133	4,82
34	495,50	84	5,61	134	228,71
35	58,60	85	815,15	135	1,80
36	148,42	86	15,14	136	180,18
37	468,45	87	10,43	137	380,88
38	80,29	88	253,68	138	125,99
39	148,64	89	330,24	139	30,34
40	225,98	90	73,56	140	264,29
41	21,96	91	44,95	141	62,31
42	244,33	92	44,38	142	347,15
43	287,77	93	350,82	143	16,60
44	1,83	94	11,38	144	209,52
45	736,75	95	36,00	145	173,65
46	0,44	96	368,70	146	111,47
47	38,45	97	283,67	147	760,03
48	452,73	98	579,87	148	30,71
49	341,18	99	93,98	149	526,33
50	4,99	100	487,38	150	300,58

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	32,91	51	59,34	101	41,12
2	33,02	52	40,93	102	40,14
3	33,46	53	59,64	103	42,24
4	35,00	54	40,89	104	34,32
5	36,81	55	41,34	105	40,14
6	37,78	56	41,46	106	59,11
7	38,80	57	40,69	107	40,14
8	38,89	58	40,68	108	39,23

NO	TTR	NO	TTR	NO	TTR
9	39,78	59	34,67	109	40,11
10	40,22	60	59,30	110	61,18
11	40,33	61	59,72	111	60,39
12	40,42	62	58,87	112	60,54
13	40,55	63	59,64	113	61,11
14	40,55	64	57,37	114	62,24
15	40,79	65	43,74	115	60,17
16	41,89	66	30,32	116	60,17
17	42,23	67	34,55	117	63,84
18	42,43	68	34,46	118	59,41
19	43,25	69	40,35	119	60,46
20	43,68	70	40,34	120	63,84
21	44,12	71	39,45	121	61,32
22	58,56	72	37,58	122	63,54
23	62,31	73	41,35	123	60,39
24	60,54	74	40,34	124	60,32
25	59,49	75	41,43	125	58,48
26	60,24	76	40,21	126	60,32
27	63,25	77	41,43	127	60,61
28	63,53	78	37,45	128	57,53
29	59,64	79	35,64	129	58,64
30	63,08	80	57,77	130	58,56
31	57,77	81	41,24	131	41,99
32	59,64	82	58,48	132	40,11
33	59,72	83	39,23	133	57,37
34	63,53	84	57,37	134	30,21
35	59,11	85	32,42	135	57,21
36	40,56	86	57,69	136	61,52
37	35,79	87	57,61	137	35,21
38	40,76	88	40,33	138	37,38
39	41,78	89	40,21	139	58,25
40	39,59	90	59,49	140	40,82
41	57,93	91	58,72	141	59,19
42	40,00	92	58,72	142	30,57



NO	TTR	NO	TTR	NO	TTR
43	42,77	93	30,22	143	57,77
44	57,21	94	57,61	144	33,45
45	43,56	95	58,40	145	34,33
46	57,21	96	43,14	146	30,12
47	58,48	97	40,24	147	35,59
48	38,41	98	39,34	148	58,25
49	31,46	99	39,13	149	37,89
50	57,37	100	40,41	150	38,66

Lampiran 17 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Welding

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	31,75	51	35,01	101	43,25
2	33,56	52	44,12	102	45,40
3	32,15	53	35,85	103	42,59
4	29,85	54	49,70	104	35,90
5	33,36	55	50,09	105	35,64
6	39,52	56	50,28	106	34,38
7	43,46	57	44,76	107	41,72
8	41,28	58	49,30	108	36,49
9	30,22	59	37,14	109	44,54
10	46,87	60	34,91	110	40,40
11	44,12	61	36,07	111	38,00
12	49,30	62	33,76	112	38,44
13	44,64	63	35,85	113	40,18
14	47,29	64	30,03	114	43,90
15	34,18	65	44,33	115	37,35
16	35,43	66	31,37	116	37,35
17	43,25	67	43,46	117	49,70
18	47,50	68	40,62	118	35,22
19	34,59	69	47,29	119	38,22
20	47,08	70	30,60	120	49,70
21	43,46	71	47,29	121	40,84
22	32,95	72	47,08	122	48,57
23	44,12	73	43,03	123	38,00
24	38,44	74	49,70	124	37,79
25	35,43	75	44,33	125	32,75
26	37,57	76	45,83	126	37,79
27	47,50	77	38,00	127	38,65
28	48,51	78	39,09	128	30,41
29	35,85	79	49,11	129	33,15

NO	TTF	NO	TTF	NO	TTF
30	46,87	80	30,98	130	32,95
31	30,98	81	41,72	131	39,52
32	35,85	82	32,75	132	46,46
33	36,07	83	45,83	133	30,03
34	48,51	84	30,03	134	43,46
35	34,38	85	49,89	135	29,66
36	40,18	86	30,79	136	41,50
37	48,31	87	30,60	137	47,29
38	35,85	88	44,33	138	38,87
39	40,18	89	46,25	139	32,15
40	43,46	90	35,43	140	44,54
41	31,37	91	33,36	141	34,59
42	44,12	92	33,36	142	46,67
43	45,40	93	46,67	143	30,98
44	29,66	94	30,60	144	42,81
45	49,89	95	32,55	145	41,28
46	29,66	96	46,87	146	38,00
47	32,75	97	45,19	147	49,89
48	48,11	98	49,11	148	32,15
49	46,46	99	36,92	149	48,71
50	30,03	100	48,51	150	45,61

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	18,78	51	20,47	101	24,68
2	19,72	52	25,12	102	25,76
3	18,99	53	20,91	103	24,35
4	17,78	54	27,91	104	20,93
5	19,62	55	28,10	105	20,80
6	22,79	56	28,20	106	20,15
7	24,79	57	25,44	107	23,91
8	23,68	58	27,71	108	21,24

NO	TTR	NO	TTR	NO	TTR
9	17,98	59	21,57	109	25,33
10	26,50	60	20,42	110	23,24
11	25,12	61	21,02	111	22,01
12	27,71	62	19,83	112	22,24
13	25,38	63	20,91	113	23,13
14	26,71	64	17,88	114	25,01
15	20,04	65	25,23	115	21,68
16	20,69	66	18,58	116	21,68
17	24,68	67	24,79	117	27,91
18	26,81	68	23,35	118	20,58
19	20,26	69	26,71	119	22,12
20	26,61	70	18,17	120	27,91
21	24,79	71	26,71	121	23,46
22	19,40	72	26,61	122	27,35
23	25,12	73	24,57	123	22,01
24	22,24	74	27,91	124	21,90
25	20,69	75	25,23	125	19,30
26	21,79	76	25,98	126	21,90
27	26,81	77	22,01	127	22,35
28	27,32	78	22,57	128	18,08
29	20,91	79	27,62	129	19,51
30	26,50	80	18,38	130	19,40
31	18,38	81	23,91	131	22,79
32	20,91	82	19,30	132	26,29
33	21,02	83	25,98	133	17,88
34	27,32	84	17,88	134	24,79
35	20,15	85	28,01	135	17,68
36	23,13	86	18,28	136	23,80
37	27,22	87	18,17	137	26,71
38	20,91	88	25,23	138	22,46
39	23,13	89	26,19	139	18,99
40	24,79	90	20,69	140	25,33
41	18,58	91	19,62	141	20,26

NO	TTR	NO	TTR	NO	TTR
42	25,12	92	19,62	142	26,40
43	25,76	93	26,40	143	18,38
44	17,68	94	18,17	144	24,46
45	28,01	95	19,20	145	23,68
46	17,68	96	26,50	146	22,01
47	19,30	97	25,66	147	28,01
48	27,12	98	27,62	148	18,99
49	26,29	99	21,46	149	27,42
50	17,88	100	27,32	150	25,87

Lampiran 18 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Water Pump

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	25,24	51	27,11	101	31,62
2	26,28	52	32,08	102	32,76
3	25,47	53	27,58	103	31,27
4	24,13	54	34,99	104	27,61
5	26,17	55	35,19	105	27,46
6	29,61	56	35,29	106	26,75
7	31,73	57	32,42	107	30,80
8	30,56	58	34,79	108	27,94
9	24,35	59	28,30	109	32,31
10	33,53	60	27,05	110	30,09
11	32,08	61	27,70	111	28,77
12	34,79	62	26,40	112	29,02
13	32,36	63	27,58	113	29,97
14	33,75	64	24,24	114	31,97
15	26,63	65	32,19	115	28,42
16	27,34	66	25,02	116	28,42
17	31,62	67	31,73	117	34,99
18	33,85	68	30,21	118	27,22
19	26,87	69	33,75	119	28,89
20	33,64	70	24,57	120	34,99
21	31,73	71	33,75	121	30,33
22	25,93	72	33,64	122	34,41
23	32,08	73	31,50	123	28,77
24	29,02	74	34,99	124	28,66
25	27,34	75	32,19	125	25,82
26	28,54	76	32,98	126	28,66
27	33,85	77	28,77	127	29,13
28	34,38	78	29,37	128	24,46
29	27,58	79	34,69	129	26,05

NO	TTF	NO	TTF	NO	TTF
30	33,53	80	24,79	130	25,93
31	24,79	81	30,80	131	29,61
32	27,58	82	25,82	132	33,31
33	27,70	83	32,98	133	24,24
34	34,38	84	24,24	134	31,73
35	26,75	85	35,09	135	24,02
36	29,97	86	24,68	136	30,68
37	34,28	87	24,57	137	33,75
38	27,58	88	32,19	138	29,25
39	29,97	89	33,20	139	25,47
40	31,73	90	27,34	140	32,31
41	25,02	91	26,17	141	26,87
42	32,08	92	26,17	142	33,42
43	32,76	93	33,42	143	24,79
44	24,02	94	24,57	144	31,39
45	35,09	95	25,70	145	30,56
46	24,02	96	33,53	146	28,77
47	25,82	97	32,65	147	35,09
48	34,17	98	34,69	148	25,47
49	33,31	99	28,17	149	34,48
50	24,24	100	34,38	150	32,87

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	9,87	51	10,64	101	12,53
2	10,30	52	12,73	102	13,01
3	9,96	53	10,84	103	12,39
4	9,41	54	13,96	104	10,85
5	10,25	55	14,04	105	10,79
6	11,69	56	14,08	106	10,49
7	12,58	57	12,87	107	12,19
8	12,09	58	13,87	108	10,99

NO	TTR	NO	TTR	NO	TTR
9	9,50	59	11,14	109	12,82
10	13,34	60	10,62	110	11,89
11	12,73	61	10,89	111	11,34
12	13,87	62	10,35	112	11,44
13	12,84	63	10,84	113	11,84
14	13,43	64	9,45	114	12,68
15	10,45	65	12,78	115	11,19
16	10,74	66	9,77	116	11,19
17	12,53	67	12,58	117	13,96
18	13,48	68	11,94	118	10,69
19	10,54	69	13,43	119	11,39
20	13,39	70	9,59	120	13,96
21	12,58	71	13,43	121	11,99
22	10,15	72	13,39	122	13,71
23	12,73	73	12,48	123	11,34
24	11,44	74	13,96	124	11,29
25	10,74	75	12,78	125	10,11
26	11,24	76	13,11	126	11,29
27	13,48	77	11,34	127	11,49
28	13,70	78	11,59	128	9,54
29	10,84	79	13,83	129	10,20
30	13,34	80	9,68	130	10,15
31	9,68	81	12,19	131	11,69
32	10,84	82	10,11	132	13,25
33	10,89	83	13,11	133	9,45
34	13,70	84	9,45	134	12,58
35	10,49	85	14,00	135	9,36
36	11,84	86	9,64	136	12,14
37	13,65	87	9,59	137	13,43
38	10,84	88	12,78	138	11,54
39	11,84	89	13,20	139	9,96
40	12,58	90	10,74	140	12,82
41	9,77	91	10,25	141	10,54



NO	TTR	NO	TTR	NO	TTR
42	12,73	92	10,25	142	13,29
43	13,01	93	13,29	143	9,68
44	9,36	94	9,59	144	12,44
45	14,00	95	10,06	145	12,09
46	9,36	96	13,34	146	11,34
47	10,11	97	12,97	147	14,00
48	13,61	98	13,83	148	9,96
49	13,25	99	11,09	149	13,74
50	9,45	100	13,70	150	13,06

Lampiran 19 Hasil Transformasi Data Bilangan Acak TTF dan TTR Komponen Hower

1. TTF

NO	TTF	NO	TTF	NO	TTF
1	21,91	51	23,78	101	28,38
2	22,95	52	28,86	102	29,56
3	22,14	53	24,26	103	28,02
4	20,81	54	31,89	104	24,29
5	22,84	55	32,10	105	24,14
6	26,32	56	32,20	106	23,42
7	28,50	57	29,21	107	27,54
8	27,30	58	31,68	108	24,62
9	21,02	59	24,99	109	29,10
10	30,36	60	23,72	110	26,81
11	28,86	61	24,38	111	25,47
12	31,68	62	23,07	112	25,72
13	29,15	63	24,26	113	26,69
14	30,59	64	20,91	114	28,74
15	23,31	65	28,98	115	25,11
16	24,02	66	21,69	116	25,11
17	28,38	67	28,50	117	31,89
18	30,70	68	26,94	118	23,90
19	23,54	69	30,59	119	25,59
20	30,48	70	21,24	120	31,89
21	28,50	71	30,59	121	27,06
22	22,60	72	30,48	122	31,28
23	28,86	73	28,27	123	25,47
24	25,72	74	31,89	124	25,35
25	24,02	75	28,98	125	22,49
26	25,23	76	29,80	126	25,35
27	30,70	77	25,47	127	25,84
28	31,25	78	26,08	128	21,13
29	24,26	79	31,58	129	22,72

NO	TTF	NO	TTF	NO	TTF
30	30,36	80	21,47	130	22,60
31	21,47	81	27,54	131	26,32
32	24,26	82	22,49	132	30,14
33	24,38	83	29,80	133	20,91
34	31,25	84	20,91	134	28,50
35	23,42	85	31,99	135	20,70
36	26,69	86	21,36	136	27,42
37	31,14	87	21,24	137	30,59
38	24,26	88	28,98	138	25,96
39	26,69	89	30,03	139	22,14
40	28,50	90	24,02	140	29,10
41	21,69	91	22,84	141	23,54
42	28,86	92	22,84	142	30,25
43	29,56	93	30,25	143	21,47
44	20,70	94	21,24	144	28,15
45	31,99	95	22,37	145	27,30
46	20,70	96	30,36	146	25,47
47	22,49	97	29,45	147	31,99
48	31,03	98	31,58	148	22,14
49	30,14	99	24,86	149	31,36
50	20,91	100	31,25	150	29,68

## 2. TTR

NO	TTR	NO	TTR	NO	TTR
1	20,91	51	22,97	101	28,15
2	22,05	52	28,69	102	29,49
3	21,16	53	23,50	103	27,74
4	19,70	54	32,18	104	23,53
5	21,92	55	32,42	105	23,37
6	25,81	56	32,54	106	22,57
7	28,28	57	29,10	107	27,19
8	26,92	58	31,93	108	23,90

NO	TTR	NO	TTR	NO	TTR
9	19,94	59	24,31	109	28,96
10	30,41	60	22,90	110	26,36
11	28,69	61	23,64	111	24,85
12	31,93	62	22,18	112	25,13
13	29,02	63	23,50	113	26,23
14	30,68	64	19,82	114	28,56
15	22,44	65	28,83	115	24,45
16	23,23	66	20,66	116	24,45
17	28,15	67	28,28	117	32,18
18	30,80	68	26,50	118	23,10
19	22,71	69	30,68	119	24,99
20	30,55	70	20,18	120	32,18
21	28,28	71	30,68	121	26,64
22	21,67	72	30,55	122	31,48
23	28,69	73	28,01	123	24,85
24	25,13	74	32,18	124	24,72
25	23,23	75	28,83	125	21,54
26	24,58	76	29,76	126	24,72
27	30,80	77	24,85	127	25,27
28	31,44	78	25,54	128	20,06
29	23,50	79	31,81	129	21,80
30	30,41	80	20,42	130	21,67
31	20,42	81	27,19	131	25,81
32	23,50	82	21,54	132	30,16
33	23,64	83	29,76	133	19,82
34	31,44	84	19,82	134	28,28
35	22,57	85	32,30	135	19,59
36	26,23	86	20,30	136	27,05
37	31,31	87	20,18	137	30,68
38	23,50	88	28,83	138	25,40
39	26,23	89	30,03	139	21,16
40	28,28	90	23,23	140	28,96
41	20,66	91	21,92	141	22,71

NO	TTR	NO	TTR	NO	TTR
42	28,69	92	21,92	142	30,29
43	29,49	93	30,29	143	20,42
44	19,59	94	20,18	144	27,88
45	32,30	95	21,42	145	26,92
46	19,59	96	30,41	146	24,85
47	21,54	97	29,36	147	32,30
48	31,19	98	31,81	148	21,16
49	30,16	99	24,17	149	31,56
50	19,82	100	31,44	150	29,63

Lampiran 20 Hasil Uji Validitas Data acak dari TTF dan TTR Tiap Komponen Kritis.

### 1. Komponen Gearbox

t-Test: Two-Sample Assuming Equal Variances

	<i>TTF Aktual</i>	<i>TTF Acak</i>
Mean	19,04545455	20,08212
Variance	497,0930736	465,3223
Observations	22	150
Pooled Variance	469,2469415	
Hypothesized Mean Difference	0	
df	170	
t Stat	0,209619727	
P(T<=t) one-tail	0,417107738	
t Critical one-tail	1,653866317	
P(T<=t) two-tail	0,834215477	
t Critical two-tail	1,974016708	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	22,9026087	25,67447
Variance	329,0052747	622,198
Observations	23	150
Pooled Variance	584,4772642	
Hypothesized Mean Difference	0	
df	171	
t Stat	0,512004391	
P(T<=t) one-tail	0,304654272	
t Critical one-tail	1,653813324	

P(T<=t) two-tail	0,609308544
t Critical two-tail	1,973933954

## 2. Komponen Sander

t-Test: Two-Sample Assuming Equal Variances

	<i>TTF Aktual</i>	<i>TTF Acak</i>
Mean	21,42105263	27,0538252
Variance	458,2573099	866,9490837
Observations	19	150
Pooled Variance	822,8984733	
Hypothesized Mean Difference	0	
df	167	
t Stat	0,806358495	
P(T<=t) one-tail	0,210591486	
t Critical one-tail	1,654029128	
P(T<=t) two-tail	0,421182971	
t Critical two-tail	1,974270957	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	24,0435	24,45759975
Variance	1386,662519	15,16519417
Observations	20	150
Pooled Variance	170,2750106	
Hypothesized Mean Difference	0	
df	168	
t Stat	0,133310904	
P(T<=t) one-tail	0,447053527	
t Critical one-tail	1,653974208	
P(T<=t) two-tail	0,894107055	
t Critical two-tail	1,974185191	

## 3. Komponen Cutter

t-Test: Two-Sample Assuming Equal Variances

	<i>TTF Aktual</i>	<i>TTF Acak</i>
Mean	7,785714286	8,69811686
Variance	92,68051948	1,28011938
Observations	56	150
Pooled Variance	25,92238411	
Hypothesized Mean Difference	0	
df	204	
t Stat	-1,39854506	
P(T<=t) one-tail	0,008680361	
t Critical one-tail	1,652357326	
P(T<=t) two-tail	0,017360722	
t Critical two-tail	1,971660889	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	10,16087719	8,169380923
Variance	250,7673581	1,209254079
Observations	57	150
Pooled Variance	69,38122397	
Hypothesized Mean Difference	0	
df	205	
t Stat	1,536584342	
P(T<=t) one-tail	0,062968556	
t Critical one-tail	1,652320556	
P(T<=t) two-tail	0,125937111	
t Critical two-tail	1,971603499	



## 4. Komponen As Cutter

t-Test: Two-Sample Assuming Equal Variances

	<i>TTF AKTUAL</i>	<i>TTF Acak</i>
Mean	144,6666667	219,74992
Variance	16932,33333	48292,3297
Observations	3	150
Pooled Variance	47876,96548	
Hypothesized Mean Difference	0	
df	151	
t Stat	-0,588491662	
P(T<=t) one-tail	0,278540779	
t Critical one-tail	1,655007387	
P(T<=t) two-tail	0,557081558	
t Critical two-tail	1,975798924	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	47,2275	47,7306163
Variance	306,799425	115,718048
Observations	4	152
Pooled Variance	119,4404129	
Hypothesized Mean Difference	0	
df	154	
t Stat	-0,090882908	
P(T<=t) one-tail	0,463851867	
t Critical one-tail	1,654808385	
P(T<=t) two-tail	0,927703735	
t Critical two-tail	1,975488058	

## 5. Komponen Welding

t-Test: Two-Sample Assuming Equal Variances

	<i>TTF Aktual</i>	<i>TTF Acak</i>
Mean	31	31,96329689
Variance	1261,5	41,1593809
Observations	13	150
Pooled Variance	132,1164457	
Hypothesized Mean Difference	0	
df	161	
t Stat	0,697198095	
P(T<=t) one-tail	0,003868577	
t Critical one-tail	1,654373057	
P(T<=t) two-tail	0,007737154	
t Critical two-tail	1,974808092	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	19,13142857	22,98546956
Variance	588,6078593	10,70236209
Observations	14	150
Pooled Variance	57,07749458	
Hypothesized Mean Difference	0	
df	162	
t Stat	-1,825456975	
P(T<=t) one-tail	0,034886842	
t Critical one-tail	1,654313957	
P(T<=t) two-tail	0,069773684	
t Critical two-tail	1,974715786	

## 6. Komponen Water Pump

t-Test: Two-Sample Assuming Equal Variances

	<i>TTF Aktual</i>	<i>TTF Acak</i>
Mean	29,07692308	29,77390562
Variance	693,7435897	12,27787005
Observations	13	150
Pooled Variance	63,07034605	
Hypothesized Mean Difference	0	
df	161	
t Stat	-0,30355179	
P(T<=t) one-tail	0,380930651	
t Critical one-tail	1,654373057	
P(T<=t) two-tail	0,761861302	
t Critical two-tail	1,974808092	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	9,917142857	11,76335632
Variance	176,9532989	2,156321015
Observations	14	150
Pooled Variance	16,18323899	
Hypothesized Mean Difference	0	
df	162	
t Stat	1,642241087	
P(T<=t) one-tail	0,051239898	
t Critical one-tail	1,654313957	
P(T<=t) two-tail	0,102479796	
t Critical two-tail	1,974715786	

## 7. Komponen Hower

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTF Acak</i>
Mean	27,4	26,5218381
Variance	850,8	12,8030259
Observations	5	150
Pooled Variance	34,7114435	
Hypothesized Mean Difference	0	
df	153	
t Stat	0,32787103	
P(T<=t) one-tail	0,371728706	
t Critical one-tail	1,654873847	
P(T<=t) two-tail	0,743457411	
t Critical two-tail	1,975590315	

t-Test: Two-Sample Assuming Equal Variances

	<i>TTR Aktual</i>	<i>TTR Acak</i>
Mean	22,852	26,07676539
Variance	691,06367	16,24831353
Observations	5	150
Pooled Variance	33,89054507	
Hypothesized Mean Difference	0	
df	153	
t Stat	-1,218494659	
P(T<=t) one-tail	0,112455787	
t Critical one-tail	1,654873847	
P(T<=t) two-tail	0,224911574	
t Critical two-tail	1,975590315	

## Lampiran 21 Hasil Simulasi Komponen Abrasive

Simulasi Monte Carlo Komponen Abrasive Dengan Skenario Interval Waktu Perawatan 11 Hari.

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	11	1,24	0,2613	Gagal	0	0	1,24	0	0,2613	1,24	1,50
2	11	2,31	0,2754	Gagal	0	0	2,31	0	0,2754	2,31	2,59
3	11	1,53	0,2644	Gagal	0	0	1,53	0	0,2644	1,53	1,79
4	11	0,17	0,2464	Gagal	0	0	0,17	0	0,2464	0,17	0,42
5	11	2,23	0,2738	Gagal	0	0	2,23	0	0,2738	2,23	2,50
6	11	6,86	0,3217	Gagal	0	0	6,86	0	0,3217	6,86	7,18
7	11	11,41	0,3520	Sukses	1	11,41	0	0,3248	0	11,00	11,32
8	11	8,58	0,3352	Gagal	0	0	8,58	0	0,3352	8,58	8,92
9	11	0,3	0,2493	Gagal	0	0	0,3	0	0,2493	0,30	0,55
10	11	18,48	0,3782	Sukses	1	18,48	0	0,3248	0	11,00	11,32
11	11	12,21	0,3571	Sukses	1	12,21	0	0,3248	0	11,00	11,32
12	11	29,86	0,3968	Sukses	1	29,86	0	0,3248	0	11,00	11,32
13	11	13,43	0,3610	Sukses	1	13,43	0	0,3248	0	11,00	11,32
14	11	19,67	0,3814	Sukses	1	19,67	0	0,3248	0	11,00	11,32
15	11	2,84	0,2802	Gagal	0	0	2,84	0	0,2802	2,84	3,12
16	11	3,67	0,2899	Gagal	0	0	3,67	0	0,2899	3,67	3,96

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
17	11	11,11	0,3504	Sukses	1	11,11	0	0,3248	0	11,00	11,32
18	11	19,81	0,3830	Sukses	1	19,81	0	0,3248	0	11,00	11,32
19	11	3,1	0,2835	Gagal	0	0	3,1	0	0,2835	3,10	3,38
20	11	18,78	0,3798	Sukses	1	18,78	0	0,3248	0	11,00	11,32
21	11	11,49	0,3520	Sukses	1	11,49	0	0,3248	0	11,00	11,32
22	11	2,01	0,2706	Gagal	0	0	2,01	0	0,2706	2,01	2,28
23	11	12,42	0,3571	Sukses	1	12,42	0	0,3248	0	11,00	11,32
24	11	5,97	0,3133	Gagal	0	0	5,97	0	0,3133	5,97	6,28
25	11	3,65	0,2899	Gagal	0	0	3,65	0	0,2899	3,65	3,94
26	11	5,28	0,3066	Gagal	0	0	5,28	0	0,3066	5,28	5,59
27	11	19,96	0,3830	Sukses	1	19,96	0	0,3248	0	11,00	11,32
28	11	24,49	0,3908	Sukses	1	24,49	0	0,3248	0	11,00	11,32
29	11	4,02	0,2933	Gagal	0	0	4,02	0	0,2933	4,02	4,31
30	11	18,28	0,3782	Sukses	1	18,28	0	0,3248	0	11,00	11,32
31	11	0,78	0,2553	Gagal	0	0	0,78	0	0,2553	0,78	1,04
32	11	3,99	0,2933	Gagal	0	0	3,99	0	0,2933	3,99	4,28
33	11	4,07	0,2949	Gagal	0	0	4,07	0	0,2949	4,07	4,36
34	11	24,89	0,3908	Sukses	1	24,89	0	0,3248	0	11,00	11,32
35	11	2,94	0,2818	Gagal	0	0	2,94	0	0,2818	2,94	3,22

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
36	11	7,46	0,3268	Gagal	0	0	7,46	0	0,3268	7,46	7,79
37	11	23,53	0,3892	Sukses	1	23,53	0	0,3248	0	11,00	11,32
38	11	4,03	0,2933	Gagal	0	0	4,03	0	0,2933	4,03	4,32
39	11	7,47	0,3268	Gagal	0	0	7,47	0	0,3268	7,47	7,80
40	11	11,35	0,3520	Sukses	1	11,35	0	0,3248	0	11,00	11,32
41	11	1,1	0,2583	Gagal	0	0	1,1	0	0,2583	1,10	1,36
42	11	12,27	0,3571	Sukses	1	12,27	0	0,3248	0	11,00	11,32
43	11	14,46	0,3669	Sukses	1	14,46	0	0,3248	0	11,00	11,32
44	11	0,09	0,2450	Gagal	0	0	0,09	0	0,2450	0,09	0,33
45	11	37,01	0,4013	Sukses	1	37,01	0	0,3248	0	11,00	11,32
46	11	0,02	0,2450	Gagal	0	0	0,02	0	0,2450	0,02	0,26
47	11	1,93	0,2691	Gagal	0	0	1,93	0	0,2691	1,93	2,20
48	11	22,74	0,3876	Sukses	1	22,74	0	0,3248	0	11,00	11,32
49	11	17,14	0,3750	Sukses	1	17,14	0	0,3248	0	11,00	11,32
50	11	0,25	0,2479	Gagal	0	0	0,25	0	0,2479	0,25	0,50
51	11	3,33	0,2867	Gagal	0	0	3,33	0	0,2867	3,33	3,62
52	11	12,51	0,3571	Sukses	1	12,51	0	0,3248	0	11,00	11,32
53	11	4,04	0,2933	Gagal	0	0	4,04	0	0,2933	4,04	4,33
54	11	33,86	0,3998	Sukses	1	33,86	0	0,3248	0	11,00	11,32

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
55	11	44,21	0,4028	Sukses	1	44,21	0	0,3248	0	11,00	11,32
56	11	53,01	0,4043	Sukses	1	53,01	0	0,3248	0	11,00	11,32
57	11	13,54	0,3620	Sukses	1	13,54	0	0,3248	0	11,00	11,32
58	11	30,04	0,3968	Sukses	1	30,04	0	0,3248	0	11,00	11,32
59	11	4,91	0,3032	Gagal	0	0	4,91	0	0,3032	4,91	5,21
60	11	4,81	0,2859	Gagal	0	0	4,81	0	0,2859	4,81	5,10
61	11	4,11	0,2949	Gagal	0	0	4,11	0	0,2949	4,11	4,40
62	11	2,52	0,2770	Gagal	0	0	2,52	0	0,2770	2,52	2,80
63	11	4	0,2933	Gagal	0	0	4	0	0,2933	4,00	4,29
64	11	0,29	0,2479	Gagal	0	0	0,29	0	0,2479	0,29	0,54
65	11	12,89	0,3587	Sukses	1	12,89	0	0,3248	0	11,00	11,32
66	11	1,06	0,2583	Gagal	0	0	1,06	0	0,2583	1,06	1,32
67	11	11,45	0,3520	Sukses	1	11,45	0	0,3248	0	11,00	11,32
68	11	8,05	0,3302	Gagal	0	0	8,05	0	0,3302	8,05	8,38
69	11	19,85	0,3814	Sukses	1	19,85	0	0,3248	0	11,00	11,32
70	11	0,6	0,2523	Gagal	0	0	0,6	0	0,2523	0,60	0,85
71	11	19,81	0,3814	Sukses	1	19,81	0	0,3248	0	11,00	11,32
72	11	18,64	0,3798	Sukses	1	18,64	0	0,3248	0	11,00	11,32
73	11	10,88	0,3487	Gagal	0	0	10,88	0	0,3487	10,88	11,23



i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
74	11	35,73	0,3998	Sukses	1	35,73	0	0,3248	0	11,00	11,32
75	11	12,48	0,3587	Sukses	1	12,48	0	0,3248	0	11,00	11,32
76	11	15,18	0,3702	Sukses	1	15,18	0	0,3248	0	11,00	11,32
77	11	5,64	0,3099	Gagal	0	0	5,64	0	0,3099	5,64	5,95
78	11	6,52	0,3183	Gagal	0	0	6,52	0	0,3183	6,52	6,84
79	11	28,48	0,3953	Sukses	1	28,48	0	0,3248	0	11,00	11,32
80	11	0,8	0,2553	Gagal	0	0	0,8	0	0,2553	0,80	1,06
81	11	9,1	0,3386	Gagal	0	0	9,1	0	0,3386	9,10	9,44
82	11	1,9	0,2691	Gagal	0	0	1,9	0	0,2691	1,90	2,17
83	11	15,54	0,3702	Sukses	1	15,54	0	0,3248	0	11,00	11,32
84	11	0,28	0,2479	Gagal	0	0	0,28	0	0,2479	0,28	0,53
85	11	40,95	0,4013	Sukses	1	40,95	0	0,3248	0	11,00	11,32
86	11	0,76	0,2538	Gagal	0	0	0,76	0	0,2538	0,76	1,01
87	11	0,52	0,2523	Gagal	0	0	0,52	0	0,2523	0,52	0,77
88	11	12,74	0,3587	Sukses	1	12,74	0	0,3248	0	11,00	11,32
89	11	16,59	0,3734	Sukses	1	16,59	0	0,3248	0	11,00	11,32
90	11	3,7	0,2899	Gagal	0	0	3,7	0	0,2899	3,70	3,99
91	11	2,26	0,2738	Gagal	0	0	2,26	0	0,2738	2,26	2,53
92	11	2,23	0,2738	Gagal	0	0	2,23	0	0,2738	2,23	2,50

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
93	11	17,62	0,3766	Sukses	1	17,62	0	0,3248	0	11,00	11,32
94	11	0,57	0,2523	Gagal	0	0	0,57	0	0,2523	0,57	0,82
95	11	1,81	0,2675	Gagal	0	0	1,81	0	0,2675	1,81	2,08
96	11	18,52	0,3782	Sukses	1	18,52	0	0,3248	0	11,00	11,32
97	11	14,25	0,3653	Sukses	1	14,25	0	0,3248	0	11,00	11,32
98	11	29,13	0,3953	Sukses	1	29,13	0	0,3248	0	11,00	11,32
99	11	4,72	0,3015	Gagal	0	0	4,72	0	0,3015	4,72	5,02
100	11	24,48	0,3908	Sukses	1	24,48	0	0,3248	0	11,00	11,32
101	11	11,16	0,3504	Sukses	1	11,16	0	0,3248	0	11,00	11,32
102	11	14,88	0,3669	Sukses	1	14,88	0	0,3248	0	11,00	11,32
103	11	53,51	0,3453	Sukses	1	53,51	0	0,3248	0	11,00	11,32
104	11	4,07	0,2936	Gagal	0	0	4,07	0	0,2936	4,07	4,36
105	11	3,79	0,2916	Gagal	0	0	3,79	0	0,2916	3,79	4,08
106	11	2,96	0,2818	Gagal	0	0	2,96	0	0,2818	2,96	3,24
107	11	9,15	0,3386	Gagal	0	0	9,15	0	0,3386	9,15	9,49
108	11	4,51	0,2982	Gagal	0	0	4,51	0	0,2982	4,51	4,81
109	11	13,2	0,3604	Sukses	1	13,2	0	0,3248	0	11,00	11,32
110	11	7,85	0,3285	Gagal	0	0	7,85	0	0,3285	7,85	8,18
111	11	5,57	0,3099	Gagal	0	0	5,57	0	0,3099	5,57	5,88

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
112	11	5,94	0,3133	Gagal	0	0	5,94	0	0,3133	5,94	6,25
113	11	7,67	0,3268	Gagal	0	0	7,67	0	0,3268	7,67	8,00
114	11	11,96	0,3554	Sukses	1	11,96	0	0,3248	0	11,00	11,32
115	11	6,04	0,3049	Gagal	0	0	6,04	0	0,3049	6,04	6,34
116	11	5,03	0,3049	Gagal	0	0	5,03	0	0,3049	5,03	5,33
117	11	36,39	0,3998	Sukses	1	36,39	0	0,3248	0	11,00	11,32
118	11	3,47	0,2883	Gagal	0	0	3,47	0	0,2883	3,47	3,76
119	11	5,77	0,3116	Gagal	0	0	5,77	0	0,3116	5,77	6,08
120	11	35,21	0,3998	Sukses	1	35,21	0	0,3248	0	11,00	11,32
121	11	8,38	0,3319	Gagal	0	0	8,38	0	0,3319	8,38	8,71
122	11	23,41	0,3912	Sukses	1	23,41	0	0,3248	0	11,00	11,32
123	11	5,56	0,3099	Gagal	0	0	5,56	0	0,3099	5,56	5,87
124	11	5,48	0,3082	Gagal	0	0	5,48	0	0,3082	5,48	5,79
125	11	1,94	0,2691	Gagal	0	0	1,94	0	0,2691	1,94	2,21
126	11	5,46	0,3082	Gagal	0	0	5,46	0	0,3082	5,46	5,77
127	11	6,13	0,3150	Gagal	0	0	6,13	0	0,3150	6,13	6,44
128	11	0,5	0,2508	Gagal	0	0	0,5	0	0,2508	0,50	0,75
129	11	2,12	0,2722	Gagal	0	0	2,12	0	0,2722	2,12	2,39
130	11	2,00	0,2706	Gagal	0	0	2	0	0,2706	2,00	2,27

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
131	11	7,03	0,3217	Gagal	0	0	7,03	0	0,3217	7,03	7,35
132	11	17,42	0,3750	Sukses	1	17,42	0	0,3248	0	11,00	11,32
133	11	0,24	0,2479	Gagal	0	0	0,24	0	0,2479	0,24	0,49
134	11	11,49	0,3520	Sukses	1	11,49	0	0,3248	0	11,00	11,32
135	11	0,09	0,2450	Gagal	0	0	0,09	0	0,2450	0,09	0,33
136	11	9,05	0,3369	Gagal	0	0	9,05	0	0,3369	9,05	9,39
137	11	19,13	0,3814	Sukses	1	19,13	0	0,3248	0	11,00	11,32
138	11	6,33	0,3166	Gagal	0	0	6,33	0	0,3166	6,33	6,65
139	11	1,52	0,2644	Gagal	0	0	1,52	0	0,2644	1,52	1,78
140	11	13,28	0,3604	Sukses	1	13,28	0	0,3248	0	11,00	11,32
141	11	3,13	0,2835	Gagal	0	0	3,13	0	0,2835	3,13	3,41
142	11	17,44	0,3766	Sukses	1	17,44	0	0,3248	0	11,00	11,32
143	11	0,83	0,2553	Gagal	0	0	0,83	0	0,2553	0,83	1,09
144	11	10,52	0,3470	Gagal	0	0	10,52	0	0,3470	10,52	10,87
145	11	8,72	0,3352	Gagal	0	0	8,72	0	0,3352	8,72	9,06
146	11	5,6	0,3099	Gagal	0	0	5,6	0	0,3099	5,60	5,91
147	11	38,18	0,4013	Sukses	1	38,18	0	0,3248	0	11,00	11,32
148	11	1,54	0,2644	Gagal	0	0	1,54	0	0,2644	1,54	1,80
149	11	26,44	0,3923	Sukses	1	26,44	0	0,3248	0	11,00	11,32

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
150	11	15,1	0,3685	Sukses	1	15,1	0	0,3248	0	11,00	11,32

## Lampiran 22 Hasil Simulasi Komponen Gearbox

Simulasi Monte Carlo Komponen Gearbox Dengan Skenario Interval Waktu Perawatan 15 Hari.

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	15	2,0	0,0523	Gagal	0	0	2,02	0	0,0523	2,02	2,07
2	15	3,9	0,0954	Gagal	0	0	3,89	0	0,0954	3,89	3,99
3	15	2,5	0,0641	Gagal	0	0	2,52	0	0,0641	2,52	2,58
4	15	0,3	0,0076	Gagal	0	0	0,25	0	0,0076	0,25	0,26
5	15	3,7	0,0921	Gagal	0	0	3,74	0	0,0921	3,74	3,83
6	15	12,2	0,2738	Gagal	0	0	12,24	0	0,2738	12,24	12,51
7	15	20,9	0,4480	Sukses	1	20,93	0	0,4279	0	15,00	15,00
8	15	15,5	0,3399	Sukses	1	15,49	0	0,4279	0	15,00	15,00
9	15	0,5	0,0133	Gagal	0	0	0,45	0	0,0133	0,45	0,46
10	15	34,8	0,7146	Sukses	1	34,79	0	0,4279	0	15,00	15,00
11	15	22,5	0,4785	Sukses	1	22,48	0	0,4279	0	15,00	15,00
12	15	57,7	1,1369	Sukses	1	57,67	0	0,4279	0	15,00	15,00
13	15	24,9	0,5245	Sukses	1	24,85	0	0,4279	0	15,00	15,00
14	15	37,1	0,7588	Sukses	1	37,14	0	0,4279	0	15,00	15,00
15	15	4,8	0,1165	Gagal	0	0	4,83	0	0,1165	4,83	4,95
16	15	6,3	0,1492	Gagal	0	0	6,32	0	0,1492	6,32	6,47

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
17	15	20,4	0,4367	Sukses	1	20,35	0	0,4279	0	15,00	15,00
18	15	37,4	0,7642	Sukses	1	37,42	0	0,4279	0	15,00	15,00
19	15	5,3	0,1270	Gagal	0	0	5,31	0	0,1270	5,31	5,44
20	15	35,4	0,7258	Sukses	1	35,38	0	0,4279	0	15,00	15,00
21	15	21,1	0,4509	Sukses	1	21,07	0	0,4279	0	15,00	15,00
22	15	3,4	0,0836	Gagal	0	0	3,36	0	0,0836	3,36	3,44
23	15	22,9	0,4864	Sukses	1	22,89	0	0,4279	0	15,00	15,00
24	15	10,6	0,2393	Gagal	0	0	10,58	0	0,2393	10,58	10,82
25	15	6,3	0,1486	Gagal	0	0	6,29	0	0,1486	6,29	6,44
26	15	9,3	0,2126	Gagal	0	0	9,3	0	0,2126	9,30	9,51
27	15	37,7	0,7700	Sukses	1	37,73	0	0,4279	0	15,00	15,00
28	15	46,8	0,9385	Sukses	1	46,8	0	0,4279	0	15,00	15,00
29	15	7,0	0,1633	Gagal	0	0	6,97	0	0,1633	6,97	7,13
30	15	34,4	0,7069	Sukses	1	34,38	0	0,4279	0	15,00	15,00
31	15	1,2	0,0333	Gagal	0	0	1,24	0	0,0333	1,24	1,27
32	15	6,9	0,1620	Gagal	0	0	6,92	0	0,1620	6,92	7,08
33	15	7,1	0,1652	Gagal	0	0	7,06	0	0,1652	7,06	7,23
34	15	47,6	0,9532	Sukses	1	47,6	0	0,4279	0	15,00	15,00
35	15	5,0	0,1207	Gagal	0	0	5,02	0	0,1207	5,02	5,14

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
36	15	13,4	0,2967	Gagal	0	0	13,36	0	0,2967	13,36	13,66
37	15	44,9	0,9028	Sukses	1	44,87	0	0,4279	0	15,00	15,00
38	15	7,0	0,1637	Gagal	0	0	6,99	0	0,1637	6,99	7,15
39	15	13,4	0,2972	Gagal	0	0	13,38	0	0,2972	13,38	13,68
40	15	20,8	0,4458	Sukses	1	20,81	0	0,4279	0	15,00	15,00
41	15	1,8	0,0467	Gagal	0	0	1,78	0	0,0467	1,78	1,83
42	15	22,6	0,4808	Sukses	1	22,6	0	0,4279	0	15,00	15,00
43	15	26,9	0,5633	Sukses	1	26,85	0	0,4279	0	15,00	15,00
44	15	0,1	0,0042	Gagal	0	0	0,13	0	0,0042	0,13	0,13
45	15	72,3	1,3995	Sukses	1	72,3	0	0,4279	0	15,00	15,00
46	15	0,0	0,0011	Gagal	0	0	0,03	0	0,0011	0,03	0,03
47	15	3,2	0,0803	Gagal	0	0	3,22	0	0,0803	3,22	3,30
48	15	43,3	0,8734	Sukses	1	43,28	0	0,4279	0	15,00	15,00
49	15	32,1	0,6642	Sukses	1	32,13	0	0,4279	0	15,00	15,00
50	15	0,4	0,0111	Gagal	0	0	0,37	0	0,0111	0,37	0,38
51	15	5,7	0,1359	Gagal	0	0	5,7129	0	0,1359	5,71	5,85
52	15	23,1	0,4897	Sukses	1	23,0538	0	0,4279	0	15,00	15,00
53	15	7,0	0,1641	Gagal	0	0	7,0141	0	0,1641	7,01	7,18
54	15	65,8	1,2839	Sukses	1	65,8276	0	0,4279	0	15,00	15,00



i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
55	15	87,2	1,6624	Sukses	1	87,201	0	0,4279	0	15,00	15,00
56	15	105,6	1,9816	Sukses	1	105,5769	0	0,4279	0	15,00	15,00
57	15	25,1	0,5286	Sukses	1	25,0522	0	0,4279	0	15,00	15,00
58	15	58,0	1,1437	Sukses	1	58,0382	0	0,4279	0	15,00	15,00
59	15	8,6	0,1979	Gagal	0	0	8,5998	0	0,1979	8,60	8,80
60	15	8,4	0,1941	Gagal	0	0	8,4213	0	0,1941	8,42	8,62
61	15	7,1	0,1666	Gagal	0	0	7,1272	0	0,1666	7,13	7,29
62	15	4,3	0,1039	Gagal	0	0	4,2663	0	0,1039	4,27	4,37
63	15	6,9	0,1624	Gagal	0	0	6,9353	0	0,1624	6,94	7,10
64	15	22,0	0,0129	Sukses	1	21,983	0	0,4279	0	15,00	15,00
65	15	10,7	0,5041	Gagal	0	0	10,6967	0	0,5041	10,70	11,20
66	15	8,8	0,0447	Gagal	0	0	8,8303	0	0,0447	8,83	8,88
67	15	71,0	0,4496	Sukses	1	71,0176	0	0,4279	0	15,00	15,00
68	15	6,0	0,3195	Gagal	0	0	5,9677	0	0,3195	5,97	6,29
69	15	10,2	0,7658	Gagal	0	0	10,1919	0	0,7658	10,19	10,96
70	15	68,6	0,0260	Sukses	1	68,601	0	0,4279	0	15,00	15,00
71	15	15,1	0,7642	Sukses	1	15,1095	0	0,4279	0	15,00	15,00
72	15	44,6	0,7204	Sukses	1	44,6291	0	0,4279	0	15,00	15,00
73	15	9,8	0,4279	Gagal	0	0	9,8166	0	0,4279	9,82	10,24

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
74	15	9,7	1,3527	Gagal	0	0	9,6681	0	1,3527	9,67	11,02
75	15	3,2	0,4887	Gagal	0	0	3,2415	0	0,4887	3,24	3,73
76	15	9,6	0,5906	Gagal	0	0	9,6155	0	0,5906	9,62	10,21
77	15	10,9	0,2265	Gagal	0	0	10,8788	0	0,2265	10,88	11,11
78	15	0,8	0,2606	Gagal	0	0	0,7727	0	0,2606	0,77	1,03
79	15	3,6	1,0858	Gagal	0	0	3,5533	0	1,0858	3,55	4,64
80	15	3,3	0,0344	Gagal	0	0	3,3372	0	0,0344	3,34	3,37
81	15	12,6	0,3600	Gagal	0	0	12,5513	0	0,3600	12,55	12,91
82	15	32,7	0,0790	Sukses	1	32,6737	0	0,4279	0	15,00	15,00
83	15	0,4	0,6040	Gagal	0	0	0,3608	0	0,6040	0,36	0,96
84	15	21,1	0,0125	Sukses	1	21,0769	0	0,4279	0	15,00	15,00
85	15	0,1	1,5434	Gagal	0	0	0,1282	0	1,5434	0,13	1,67
86	15	16,4	0,0326	Sukses	1	16,3932	0	0,4279	0	15,00	15,00
87	15	36,1	0,0227	Sukses	1	36,0757	0	0,4279	0	15,00	15,00
88	15	11,2	0,4986	Gagal	0	0	11,2449	0	0,4986	11,24	11,74
89	15	2,5	0,6436	Gagal	0	0	2,5088	0	0,6436	2,51	3,15
90	15	24,5	0,1504	Sukses	1	24,5458	0	0,4279	0	15,00	15,00
91	15	5,4	0,0934	Gagal	0	0	5,3546	0	0,0934	5,35	5,45
92	15	32,7	0,0922	Sukses	1	32,7174	0	0,4279	0	15,00	15,00

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
93	15	1,3	0,6824	Gagal	0	0	1,3289	0	0,6824	1,33	2,01
94	15	19,2	0,0247	Sukses	1	19,2173	0	0,4279	0	15,00	15,00
95	15	15,8	0,0753	Sukses	1	15,7679	0	0,4279	0	15,00	15,00
96	15	9,9	0,7160	Gagal	0	0	9,8831	0	0,7160	9,88	10,60
97	15	74,7	0,5555	Sukses	1	74,7098	0	0,4279	0	15,00	15,00
98	15	2,5	1,1099	Gagal	0	0	2,5404	0	1,1099	2,54	3,65
99	15	50,7	0,1907	Sukses	1	50,7261	0	0,4279	0	15,00	15,00
100	15	28,1	0,9381	Sukses	1	28,1098	0	0,4279	0	15,00	15,00
101	15	20,4	0,4384	Sukses	1	20,4388	0	0,4279	0	15,00	15,00
102	15	27,7	0,5795	Sukses	1	27,6891	0	0,4279	0	15,00	15,00
103	15	106,6	1,9998	Sukses	1	106,6345	0	0,4279	0	15,00	15,00
104	15	7,1	0,1652	Gagal	0	0	7,0621	0	0,1652	7,06	7,23
105	15	6,6	0,1542	Gagal	0	0	6,5524	0	0,1542	6,55	6,71
106	15	5,0	0,1213	Gagal	0	0	5,0466	0	0,1213	5,05	5,17
107	15	16,6	0,3617	Sukses	1	16,5792	0	0,4279	0	15,00	15,00
108	15	7,9	0,1824	Gagal	0	0	7,867	0	0,1824	7,87	8,05
109	15	24,4	0,5158	Sukses	1	24,3943	0	0,4279	0	15,00	15,00
110	15	14,1	0,3118	Gagal	0	0	14,1046	0	0,3118	14,10	14,42
111	15	9,8	0,2237	Gagal	0	0	9,8266	0	0,2237	9,83	10,05

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
112	15	10,5	0,2380	Gagal	0	0	10,5096	0	0,2380	10,51	10,75
113	15	13,8	0,3049	Gagal	0	0	13,7635	0	0,3049	13,76	14,07
114	15	22,0	0,4688	Sukses	1	21,983	0	0,4279	0	15,00	15,00
115	15	10,7	0,2419	Gagal	0	0	10,6967	0	0,2419	10,70	10,94
116	15	8,8	0,2028	Gagal	0	0	8,8303	0	0,2028	8,83	9,03
117	15	71,0	1,3766	Sukses	1	71,0176	0	0,4279	0	15,00	15,00
118	15	6,0	0,1415	Gagal	0	0	5,9677	0	0,1415	5,97	6,11
119	15	10,2	0,2313	Gagal	0	0	10,1919	0	0,2313	10,19	10,42
120	15	68,6	1,3335	Sukses	1	68,601	0	0,4279	0	15,00	15,00
121	15	15,1	0,3322	Sukses	1	15,1095	0	0,4279	0	15,00	15,00
122	15	44,6	0,8984	Sukses	1	44,6291	0	0,4279	0	15,00	15,00
123	15	9,8	0,2235	Gagal	0	0	9,8166	0	0,2235	9,82	10,04
124	15	9,7	0,2204	Gagal	0	0	9,6681	0	0,2204	9,67	9,89
125	15	3,2	0,0808	Gagal	0	0	3,2415	0	0,0808	3,24	3,32
126	15	9,6	0,2193	Gagal	0	0	9,6155	0	0,2193	9,62	9,83
127	15	10,9	0,2456	Gagal	0	0	10,8788	0	0,2456	10,88	11,12
128	15	0,8	0,0216	Gagal	0	0	0,7727	0	0,0216	0,77	0,79
129	15	3,6	0,0879	Gagal	0	0	3,5533	0	0,0879	3,55	3,64
130	15	3,3	0,0830	Gagal	0	0	3,3372	0	0,0830	3,34	3,42

i	tp (hari)	ti (hari)	Tc <sub>mi</sub> (hari)	Indikator	Poin	Tp <sub>i</sub> (hari)	Tf <sub>i</sub> (hari)	Tp <sub>mi</sub> (hari)	Tc <sub>mi</sub> (hari)	Top <sub>ri</sub> (hari)	Tj <sub>ami</sub> (hari)
131	15	12,6	0,2801	Gagal	0	0	12,5513	0	0,2801	12,55	12,83
132	15	32,7	0,6746	Sukses	1	32,6737	0	0,4279	0	15,00	15,00
133	15	0,4	0,0107	Gagal	0	0	0,3608	0	0,0107	0,36	0,37
134	15	21,1	0,4510	Sukses	1	21,0769	0	0,4279	0	15,00	15,00
135	15	0,1	0,0042	Gagal	0	0	0,1282	0	0,0042	0,13	0,13
136	15	16,4	0,3580	Sukses	1	16,3932	0	0,4279	0	15,00	15,00
137	15	36,1	0,7389	Sukses	1	36,0757	0	0,4279	0	15,00	15,00
138	15	11,2	0,2532	Gagal	0	0	11,2449	0	0,2532	11,24	11,50
139	15	2,5	0,0638	Gagal	0	0	2,5088	0	0,0638	2,51	2,57
140	15	24,5	0,5187	Sukses	1	24,5458	0	0,4279	0	15,00	15,00
141	15	5,4	0,1281	Gagal	0	0	5,3546	0	0,1281	5,35	5,48
142	15	32,7	0,6755	Sukses	1	32,7174	0	0,4279	0	15,00	15,00
143	15	1,3	0,0356	Gagal	0	0	1,3289	0	0,0356	1,33	1,36
144	15	19,2	0,4143	Sukses	1	19,2173	0	0,4279	0	15,00	15,00
145	15	15,8	0,3454	Sukses	1	15,7679	0	0,4279	0	15,00	15,00
146	15	9,9	0,2249	Gagal	0	0	9,8831	0	0,2249	9,88	10,11
147	15	74,7	1,4422	Sukses	1	74,7098	0	0,4279	0	15,00	15,00
148	15	2,5	0,0646	Gagal	0	0	2,5404	0	0,0646	2,54	2,60
149	15	50,7	1,0106	Sukses	1	50,7261	0	0,4279	0	15,00	15,00

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
150	15	28,1	0,5875	Sukses	1	28,1098	0	0,4279	0	15,00	15,00

## Lampiran 23 Hasil Simulasi Komponen Sander

## Simulasi Monte Carlo Komponen Sander Dengan Skenario Interval Waktu Perawatan 23 Hari

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	23	2,34	0,3245	Gagal	0	0	2,34	0	0,3245	2,34	2,66
2	23	4,63	0,3428	Gagal	0	0	4,63	0	0,3428	4,63	4,97
3	23	2,94	0,3286	Gagal	0	0	2,94	0	0,3286	2,94	3,27
4	23	0,26	0,3052	Gagal	0	0	0,26	0	0,3052	0,26	0,57
5	23	4,44	0,3408	Gagal	0	0	4,44	0	0,3408	4,44	4,78
6	23	15,31	0,4032	Gagal	0	0	15,31	0	0,4032	15,31	15,71
7	23	26,78	0,4431	Sukses	1	26,78	0	0,4076	0	23,00	23,41
8	23	19,57	0,4210	Gagal	0	0	19,57	0	0,4210	19,57	19,99
9	23	0,49	0,3090	Gagal	0	0	0,49	0	0,3090	0,49	0,80
10	23	45,49	0,4775	Sukses	1	45,49	0	0,4076	0	23,00	23,41
11	23	28,85	0,4497	Sukses	1	28,85	0	0,4076	0	23,00	23,41
12	23	77,06	0,5021	Sukses	1	77,06	0	0,4076	0	23,00	23,41
13	23	32,03	0,4549	Sukses	1	32,03	0	0,4076	0	23,00	23,41
14	23	48,7	0,4817	Sukses	1	48,7	0	0,4076	0	23,00	23,41
15	23	5,8	0,3491	Gagal	0	0	5,8	0	0,3491	5,80	6,15

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
16	23	7,69	0,3618	Gagal	0	0	7,69	0	0,3618	7,69	8,05
17	23	26,01	0,4409	Sukses	1	26,01	0	0,4076	0	23,00	23,41
18	23	49,09	0,4838	Sukses	1	49,09	0	0,4076	0	23,00	23,41
19	23	6,4	0,3533	Gagal	0	0	6,4	0	0,3533	6,40	6,75
20	23	46,3	0,4796	Sukses	1	46,3	0	0,4076	0	23,00	23,41
21	23	26,97	0,4431	Sukses	1	26,97	0	0,4076	0	23,00	23,41
22	23	3,98	0,3366	Gagal	0	0	3,98	0	0,3366	3,98	4,32
23	23	29,4	0,4497	Sukses	1	29,4	0	0,4076	0	23,00	23,41
24	23	13,14	0,3922	Gagal	0	0	13,14	0	0,3922	13,14	13,53
25	23	7,65	0,3618	Gagal	0	0	7,65	0	0,3618	7,65	8,01
26	23	11,49	0,3835	Gagal	0	0	11,49	0	0,3835	11,49	11,87
27	23	49,51	0,4838	Sukses	1	49,51	0	0,4076	0	23,00	23,41
28	23	61,98	0,4941	Sukses	1	61,98	0	0,4076	0	23,00	23,41
29	23	8,51	0,3661	Gagal	0	0	8,51	0	0,3661	8,51	8,88
30	23	44,94	0,4775	Sukses	1	44,94	0	0,4076	0	23,00	23,41
31	23	1,4	0,3167	Gagal	0	0	1,4	0	0,3167	1,40	1,72
32	23	8,44	0,3661	Gagal	0	0	8,44	0	0,3661	8,44	8,81
33	23	8,63	0,3682	Gagal	0	0	8,63	0	0,3682	8,63	9,00
34	23	63,09	0,4941	Sukses	1	63,09	0	0,4076	0	23,00	23,41



i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
35	23	6,04	0,3512	Gagal	0	0	6,04	0	0,3512	6,04	6,39
36	23	16,77	0,4099	Gagal	0	0	16,77	0	0,4099	16,77	17,18
37	23	59,32	0,4920	Sukses	1	59,32	0	0,4076	0	23,00	23,41
38	23	8,54	0,3661	Gagal	0	0	8,54	0	0,3661	8,54	8,91
39	23	16,8	0,4099	Gagal	0	0	16,8	0	0,4099	16,80	17,21
40	23	26,62	0,4431	Sukses	1	26,62	0	0,4076	0	23,00	23,41
41	23	2,05	0,3206	Gagal	0	0	2,05	0	0,3206	2,05	2,37
42	23	29,01	0,4497	Sukses	1	29,01	0	0,4076	0	23,00	23,41
43	23	34,72	0,4626	Sukses	1	34,72	0	0,4076	0	23,00	23,41
44	23	0,13	0,3034	Gagal	0	0	0,13	0	0,3034	0,13	0,43
45	23	97,56	0,5080	Sukses	1	97,56	0	0,4076	0	23,00	23,41
46	23	0,03	0,3034	Gagal	0	0	0,03	0	0,3034	0,03	0,33
47	23	3,8	0,3346	Gagal	0	0	3,8	0	0,3346	3,80	4,13
48	23	57,13	0,4900	Sukses	1	57,13	0	0,4076	0	23,00	23,41
49	23	41,87	0,4733	Sukses	1	41,87	0	0,4076	0	23,00	23,41
50	23	0,4	0,3071	Gagal	0	0	0,4	0	0,3071	0,40	0,71
51	23	6,91	0,3575	Gagal	0	0	6,91	0	0,3575	6,91	7,27
52	23	29,62	0,4497	Sukses	1	29,62	0	0,4076	0	23,00	23,41
53	23	8,56	0,3661	Gagal	0	0	8,56	0	0,3661	8,56	8,93

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
54	23	88,47	0,5060	Sukses	1	88,47	0	0,4076	0	23,00	23,41
55	23	118,62	0,5100	Sukses	1	118,62	0	0,4076	0	23,00	23,41
56	23	144,79	0,5119	Sukses	1	144,79	0	0,4076	0	23,00	23,41
57	23	32,3	0,4562	Sukses	1	32,3	0	0,4076	0	23,00	23,41
58	23	77,58	0,5021	Sukses	1	77,58	0	0,4076	0	23,00	23,41
59	23	10,59	0,3791	Gagal	0	0	10,59	0	0,3791	10,59	10,97
60	23	10,36	0,3565	Gagal	0	0	10,36	0	0,3565	10,36	10,72
61	23	8,71	0,3682	Gagal	0	0	8,71	0	0,3682	8,71	9,08
62	23	5,1	0,3449	Gagal	0	0	5,1	0	0,3449	5,10	5,44
63	23	8,46	0,3661	Gagal	0	0	8,46	0	0,3661	8,46	8,83
64	23	0,48	0,3071	Gagal	0	0	0,48	0	0,3071	0,48	0,79
65	23	30,61	0,4518	Sukses	1	30,61	0	0,4076	0	23,00	23,41
66	23	1,96	0,3206	Gagal	0	0	1,96	0	0,3206	1,96	2,28
67	23	26,88	0,4431	Sukses	1	26,88	0	0,4076	0	23,00	23,41
68	23	18,24	0,4143	Gagal	0	0	18,24	0	0,4143	18,24	18,65
69	23	49,21	0,4817	Sukses	1	49,21	0	0,4076	0	23,00	23,41
70	23	1,06	0,3128	Gagal	0	0	1,06	0	0,3128	1,06	1,37
71	23	49,09	0,4817	Sukses	1	49,09	0	0,4076	0	23,00	23,41
72	23	45,91	0,4796	Sukses	1	45,91	0	0,4076	0	23,00	23,41

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
73	23	25,42	0,4387	Sukses	1	25,42	0	0,4076	0	23,00	23,41
74	23	93,87	0,5060	Sukses	1	93,87	0	0,4076	0	23,00	23,41
75	23	29,55	0,4518	Sukses	1	29,55	0	0,4076	0	23,00	23,41
76	23	36,64	0,4669	Sukses	1	36,64	0	0,4076	0	23,00	FALSE
77	23	12,34	0,3878	Gagal	0	0	12,34	0	0,3878	12,34	12,73
78	23	14,48	0,3988	Gagal	0	0	14,48	0	0,3988	14,48	14,88
79	23	73,14	0,5001	Sukses	1	73,14	0	0,4076	0	23,00	23,41
80	23	1,45	0,3167	Gagal	0	0	1,45	0	0,3167	1,45	1,77
81	23	20,89	0,4254	Gagal	0	0	20,89	0	0,4254	20,89	21,32
82	23	3,73	0,3346	Gagal	0	0	3,73	0	0,3346	3,73	4,06
83	23	37,59	0,4669	Sukses	1	37,59	0	0,4076	0	23,00	23,41
84	23	0,46	0,3071	Gagal	0	0	0,46	0	0,3071	0,46	0,77
85	23	109,03	0,5080	Sukses	1	109,03	0	0,4076	0	23,00	23,41
86	23	1,37	0,3148	Gagal	0	0	1,37	0	0,3148	1,37	1,68
87	23	0,91	0,3128	Gagal	0	0	0,91	0	0,3128	0,91	1,22
88	23	30,23	0,4518	Sukses	1	30,23	0	0,4076	0	23,00	23,41
89	23	40,39	0,4712	Sukses	1	40,39	0	0,4076	0	23,00	23,41
90	23	7,76	0,3618	Gagal	0	0	7,76	0	0,3618	7,76	8,12
91	23	4,51	0,3408	Gagal	0	0	4,51	0	0,3408	4,51	4,85

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
92	23	4,45	0,3408	Gagal	0	0	4,45	0	0,3408	4,45	4,79
93	23	43,17	0,4754	Sukses	1	43,17	0	0,4076	0	23,00	23,41
94	23	1	0,3128	Gagal	0	0	1	0	0,3128	1,00	1,31
95	23	3,54	0,3326	Gagal	0	0	3,54	0	0,3326	3,54	3,87
96	23	45,59	0,4775	Sukses	1	45,59	0	0,4076	0	23,00	23,41
97	23	34,18	0,4605	Sukses	1	34,18	0	0,4076	0	23,00	23,41
98	23	74,99	0,5001	Sukses	1	74,99	0	0,4076	0	23,00	23,41
99	23	10,15	0,3769	Gagal	0	0	10,15	0	0,3769	10,15	10,53
100	23	61,95	0,4941	Sukses	1	61,95	0	0,4076	0	23,00	23,41
101	23	26,13	0,4409	Sukses	1	26,13	0	0,4076	0	23,00	23,41
102	23	35,86	0,4626	Sukses	1	35,86	0	0,4076	0	23,00	23,41
103	23	146,31	0,4343	Sukses	1	146,31	0	0,4076	0	23,00	23,41
104	23	8,63	0,3665	Gagal	0	0	8,63	0	0,3665	8,63	9,00
105	23	7,98	0,3639	Gagal	0	0	7,98	0	0,3639	7,98	8,34
106	23	6,08	0,3512	Gagal	0	0	6,08	0	0,3512	6,08	6,43
107	23	21	0,4254	Gagal	0	0	21	0	0,4254	21,00	21,43
108	23	9,65	0,3725	Gagal	0	0	9,65	0	0,3725	9,65	10,02
109	23	31,42	0,4540	Sukses	1	31,42	0	0,4076	0	23,00	23,41
110	23	17,74	0,4121	Gagal	0	0	17,74	0	0,4121	17,74	18,15

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
111	23	12,17	0,3878	Gagal	0	0	12,17	0	0,3878	12,17	12,56
112	23	13,06	0,3922	Gagal	0	0	13,06	0	0,3922	13,06	13,45
113	23	17,3	0,4099	Gagal	0	0	17,3	0	0,4099	17,30	17,71
114	23	28,19	0,4475	Sukses	1	28,19	0	0,4076	0	23,00	23,41
115	23	13,3	0,3813	Gagal	0	0	13,3	0	0,3813	13,30	13,68
116	23	10,89	0,3813	Gagal	0	0	10,89	0	0,3813	10,89	11,27
117	23	95,76	0,5060	Sukses	1	95,76	0	0,4076	0	23,00	23,41
118	23	7,24	0,3596	Gagal	0	0	7,24	0	0,3596	7,24	7,60
119	23	12,65	0,3900	Gagal	0	0	12,65	0	0,3900	12,65	13,04
120	23	92,36	0,5060	Sukses	1	92,36	0	0,4076	0	23,00	23,41
121	23	19,07	0,4166	Gagal	0	0	19,07	0	0,4166	19,07	19,49
122	23	58,99	0,4947	Sukses	1	58,99	0	0,4076	0	23,00	23,41
123	23	12,16	0,3878	Gagal	0	0	12,16	0	0,3878	12,16	12,55
124	23	11,97	0,3856	Gagal	0	0	11,97	0	0,3856	11,97	12,36
125	23	3,83	0,3346	Gagal	0	0	3,83	0	0,3346	3,83	4,16
126	23	11,9	0,3856	Gagal	0	0	11,9	0	0,3856	11,90	12,29
127	23	13,54	0,3944	Gagal	0	0	13,54	0	0,3944	13,54	13,93
128	23	0,86	0,3109	Gagal	0	0	0,86	0	0,3109	0,86	1,17
129	23	4,21	0,3387	Gagal	0	0	4,21	0	0,3387	4,21	4,55

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
130	23	3,95	0,3366	Gagal	0	0	3,95	0	0,3366	3,95	4,29
131	23	15,71	0,4032	Gagal	0	0	15,71	0	0,4032	15,71	16,11
132	23	42,61	0,4733	Sukses	1	42,61	0	0,4076	0	23,00	23,41
133	23	0,39	0,3071	Gagal	0	0	0,39	0	0,3071	0,39	0,70
134	23	26,98	0,4431	Sukses	1	26,98	0	0,4076	0	23,00	23,41
135	23	0,13	0,3034	Gagal	0	0	0,13	0	0,3034	0,13	0,43
136	23	20,76	0,4232	Gagal	0	0	20,76	0	0,4232	20,76	21,18
137	23	47,25	0,4817	Sukses	1	47,25	0	0,4076	0	23,00	23,41
138	23	14,01	0,3966	Gagal	0	0	14,01	0	0,3966	14,01	14,41
139	23	2,93	0,3286	Gagal	0	0	2,93	0	0,3286	2,93	3,26
140	23	31,62	0,4540	Sukses	1	31,62	0	0,4076	0	23,00	23,41
141	23	6,46	0,3533	Gagal	0	0	6,46	0	0,3533	6,46	6,81
142	23	42,67	0,4754	Sukses	1	42,67	0	0,4076	0	23,00	23,41
143	23	1,51	0,3167	Gagal	0	0	1,51	0	0,3167	1,51	1,83
144	23	24,5	0,4365	Sukses	1	24,5	0	0,4076	0	23,00	23,41
145	23	19,93	0,4210	Gagal	0	0	19,93	0	0,4210	19,93	20,35
146	23	12,25	0,3878	Gagal	0	0	12,25	0	0,3878	12,25	12,64
147	23	100,95	0,5080	Sukses	1	100,95	0	0,4076	0	23,00	23,41
148	23	2,97	0,3286	Gagal	0	0	2,97	0	0,3286	2,97	3,30

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
149	23	67,42	0,4961	Sukses	1	67,42	0	0,4076	0	23,00	23,41
150	23	36,43	0,4648	Sukses	1	36,43	0	0,4076	0	23,00	23,41

## Lampiran 24 Hasil Simulasi Komponen Cutter

## Simulasi Monte Carlo Komponen Cutter Dengan Skenario Interval Waktu Perawatan 9 Hari

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	9	8,23	0,1126	Gagal	0	0	8,23	0	0,1126	8,23	8,34
2	9	8,57	0,1179	Gagal	0	0	8,57	0	0,1179	8,57	8,69
3	9	8,31	0,1137	Gagal	0	0	8,31	0	0,1137	8,31	8,42
4	9	7,87	0,1069	Gagal	0	0	7,87	0	0,1069	7,87	7,98
5	9	8,53	0,1173	Gagal	0	0	8,53	0	0,1173	8,53	8,65
6	9	9,65	0,1351	Sukses	1	9,65	0	0,1362	0	9,00	9,14
7	9	10,33	0,1463	Sukses	1	10,33	0	0,1362	0	9,00	9,14
8	9	9,95	0,1401	Sukses	1	9,95	0	0,1362	0	9,00	9,14
9	9	7,95	0,1080	Gagal	0	0	7,95	0	0,1080	7,95	8,06
10	9	10,91	0,1558	Sukses	1	10,91	0	0,1362	0	9,00	9,14
11	9	10,44	0,1481	Sukses	1	10,44	0	0,1362	0	9,00	9,14
12	9	11,32	0,1626	Sukses	1	11,32	0	0,1362	0	9,00	9,14
13	9	10,53	0,1496	Sukses	1	10,53	0	0,1362	0	9,00	9,14
14	9	10,98	0,1570	Sukses	1	10,98	0	0,1362	0	9,00	9,14
15	9	8,68	0,1197	Gagal	0	0	8,68	0	0,1197	8,68	8,80



i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
16	9	8,91	0,1233	Gagal	0	0	8,91	0	0,1233	8,91	9,03
17	9	10,29	0,1457	Sukses	1	10,29	0	0,1362	0	9,00	9,14
18	9	11,02	0,1576	Sukses	1	11,02	0	0,1362	0	9,00	9,14
19	9	8,76	0,1209	Gagal	0	0	8,76	0	0,1209	8,76	8,88
20	9	10,95	0,1564	Sukses	1	10,95	0	0,1362	0	9,00	9,14
21	9	10,33	0,1463	Sukses	1	10,33	0	0,1362	0	9,00	9,14
22	9	8,46	0,1161	Gagal	0	0	8,46	0	0,1161	8,46	8,58
23	9	10,44	0,1481	Sukses	1	10,44	0	0,1362	0	9,00	9,14
24	9	9,45	0,1320	Sukses	1	9,45	0	0,1362	0	9,00	9,14
25	9	8,91	0,1233	Gagal	0	0	8,91	0	0,1233	8,91	9,03
26	9	9,3	0,1295	Sukses	1	9,3	0	0,1362	0	9,00	9,14
27	9	11,02	0,1576	Sukses	1	11,02	0	0,1362	0	9,00	9,14
28	9	11,19	0,1604	Sukses	1	11,19	0	0,1362	0	9,00	9,14
29	9	8,99	0,1246	Gagal	0	0	8,99	0	0,1246	8,99	9,11
30	9	10,91	0,1558	Sukses	1	10,91	0	0,1362	0	9,00	9,14
31	9	8,09	0,1103	Gagal	0	0	8,09	0	0,1103	8,09	8,20
32	9	8,99	0,1246	Gagal	0	0	8,99	0	0,1246	8,99	9,11
33	9	9,03	0,1252	Sukses	1	9,03	0	0,1362	0	9,00	9,14
34	9	11,19	0,1604	Sukses	1	11,19	0	0,1362	0	9,00	9,14

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
35	9	8,72	0,1203	Gagal	0	0	8,72	0	0,1203	8,72	8,84
36	9	9,76	0,1370	Sukses	1	9,76	0	0,1362	0	9,00	9,14
37	9	11,15	0,1598	Sukses	1	11,15	0	0,1362	0	9,00	9,14
38	9	8,99	0,1246	Gagal	0	0	8,99	0	0,1246	8,99	9,11
39	9	9,76	0,1370	Sukses	1	9,76	0	0,1362	0	9,00	9,14
40	9	10,33	0,1463	Sukses	1	10,33	0	0,1362	0	9,00	9,14
41	9	8,16	0,1114	Gagal	0	0	8,16	0	0,1114	8,16	8,27
42	9	10,44	0,1481	Sukses	1	10,44	0	0,1362	0	9,00	9,14
43	9	10,66	0,1517	Sukses	1	10,66	0	0,1362	0	9,00	9,14
44	9	7,84	0,1063	Gagal	0	0	7,84	0	0,1063	7,84	7,95
45	9	11,41	0,1642	Sukses	1	11,41	0	0,1362	0	9,00	9,14
46	9	7,84	0,1063	Gagal	0	0	7,84	0	0,1063	7,84	7,95
47	9	8,42	0,1155	Gagal	0	0	8,42	0	0,1155	8,42	8,54
48	9	11,12	0,1593	Sukses	1	11,12	0	0,1362	0	9,00	9,14
49	9	10,84	0,1547	Sukses	1	10,84	0	0,1362	0	9,00	9,14
50	9	7,91	0,1074	Gagal	0	0	7,91	0	0,1074	7,91	8,02
51	9	8,84	0,1221	Gagal	0	0	8,84	0	0,1221	8,84	8,96
52	9	10,44	0,1481	Sukses	1	10,44	0	0,1362	0	9,00	9,14
53	9	8,99	0,1246	Gagal	0	0	8,99	0	0,1246	8,99	9,11

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
54	9	11,38	0,1637	Sukses	1	11,38	0	0,1362	0	9,00	9,14
55	9	11,45	0,1647	Sukses	1	11,45	0	0,1362	0	9,00	9,14
56	9	11,48	0,1653	Sukses	1	11,48	0	0,1362	0	9,00	9,14
57	9	10,55	0,1500	Sukses	1	10,55	0	0,1362	0	9,00	9,14
58	9	11,32	0,1626	Sukses	1	11,32	0	0,1362	0	9,00	9,14
59	9	9,22	0,1283	Sukses	1	9,22	0	0,1362	0	9,00	9,14
60	9	8,82	0,1218	Gagal	0	0	8,82	0	0,1218	8,82	8,94
61	9	9,03	0,1252	Sukses	1	9,03	0	0,1362	0	9,00	9,14
62	9	8,61	0,1185	Gagal	0	0	8,61	0	0,1185	8,61	8,73
63	9	8,99	0,1246	Gagal	0	0	8,99	0	0,1246	8,99	9,11
64	9	7,91	0,1074	Gagal	0	0	7,91	0	0,1074	7,91	8,02
65	9	10,48	0,1487	Sukses	1	10,48	0	0,1362	0	9,00	9,14
66	9	8,16	0,1114	Gagal	0	0	8,16	0	0,1114	8,16	8,27
67	9	10,33	0,1463	Sukses	1	10,33	0	0,1362	0	9,00	9,14
68	9	9,84	0,1383	Sukses	1	9,84	0	0,1362	0	9,00	9,14
69	9	10,98	0,1570	Sukses	1	10,98	0	0,1362	0	9,00	9,14
70	9	8,02	0,1091	Gagal	0	0	8,02	0	0,1091	8,02	8,13
71	9	10,98	0,1570	Sukses	1	10,98	0	0,1362	0	9,00	9,14
72	9	10,95	0,1564	Sukses	1	10,95	0	0,1362	0	9,00	9,14

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
73	9	10,26	0,1451	Sukses	1	10,26	0	0,1362	0	9,00	9,14
74	9	11,38	0,1637	Sukses	1	11,38	0	0,1362	0	9,00	9,14
75	9	10,48	0,1487	Sukses	1	10,48	0	0,1362	0	9,00	9,14
76	9	10,73	0,1529	Sukses	1	10,73	0	0,1362	0	9,00	9,14
77	9	9,38	0,1308	Sukses	1	9,38	0	0,1362	0	9,00	9,14
78	9	9,57	0,1339	Sukses	1	9,57	0	0,1362	0	9,00	9,14
79	9	11,29	0,1620	Sukses	1	11,29	0	0,1362	0	9,00	9,14
80	9	8,09	0,1103	Gagal	0	0	8,09	0	0,1103	8,09	8,20
81	9	10,03	0,1414	Sukses	1	10,03	0	0,1362	0	9,00	9,14
82	9	8,42	0,1155	Gagal	0	0	8,42	0	0,1155	8,42	8,54
83	9	10,73	0,1529	Sukses	1	10,73	0	0,1362	0	9,00	9,14
84	9	7,91	0,1074	Gagal	0	0	7,91	0	0,1074	7,91	8,02
85	9	11,41	0,1642	Sukses	1	11,41	0	0,1362	0	9,00	9,14
86	9	8,05	0,1097	Gagal	0	0	8,05	0	0,1097	8,05	8,16
87	9	8,02	0,1091	Gagal	0	0	8,02	0	0,1091	8,02	8,13
88	9	10,48	0,1487	Sukses	1	10,48	0	0,1362	0	9,00	9,14
89	9	10,81	0,1541	Sukses	1	10,81	0	0,1362	0	9,00	9,14
90	9	8,91	0,1233	Gagal	0	0	8,91	0	0,1233	8,91	9,03
91	9	8,53	0,1173	Gagal	0	0	8,53	0	0,1173	8,53	8,65

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
92	9	8,53	0,1173	Gagal	0	0	8,53	0	0,1173	8,53	8,65
93	9	10,88	0,1553	Sukses	1	10,88	0	0,1362	0	9,00	9,14
94	9	8,02	0,1091	Gagal	0	0	8,02	0	0,1091	8,02	8,13
95	9	8,38	0,1149	Gagal	0	0	8,38	0	0,1149	8,38	8,49
96	9	10,91	0,1558	Sukses	1	10,91	0	0,1362	0	9,00	9,14
97	9	10,63	0,1511	Sukses	1	10,63	0	0,1362	0	9,00	9,14
98	9	11,29	0,1620	Sukses	1	11,29	0	0,1362	0	9,00	9,14
99	9	9,18	0,1277	Sukses	1	9,18	0	0,1362	0	9,00	9,14
100	9	11,19	0,1604	Sukses	1	11,19	0	0,1362	0	9,00	9,14
101	9	10,29	0,1457	Sukses	1	10,29	0	0,1362	0	9,00	9,14
102	9	10,66	0,1517	Sukses	1	10,66	0	0,1362	0	9,00	9,14
103	9	10,18	0,1439	Sukses	1	10,18	0	0,1362	0	9,00	9,14
104	9	9	0,1247	Sukses	1	0	0	0,1362	0	9,00	9,14
105	9	8,95	0,1240	Gagal	0	0	8,95	0	0,1240	8,95	9,07
106	9	8,72	0,1203	Gagal	0	0	8,72	0	0,1203	8,72	8,84
107	9	10,03	0,1414	Sukses	1	10,03	0	0,1362	0	9,00	9,14
108	9	9,11	0,1264	Sukses	1	9,11	0	0,1362	0	9,00	9,14
109	9	10,52	0,1493	Sukses	1	10,52	0	0,1362	0	9,00	9,14
110	9	9,8	0,1376	Sukses	1	9,8	0	0,1362	0	9,00	9,14

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
111	9	9,38	0,1308	Sukses	1	9,38	0	0,1362	0	9,00	9,14
112	9	9,45	0,1320	Sukses	1	9,45	0	0,1362	0	9,00	9,14
113	9	9,76	0,1370	Sukses	1	9,76	0	0,1362	0	9,00	9,14
114	9	10,41	0,1475	Sukses	1	10,41	0	0,1362	0	9,00	9,14
115	9	9,26	0,1289	Sukses	1	9,26	0	0,1362	0	9,00	9,14
116	9	9,26	0,1289	Sukses	1	9,26	0	0,1362	0	9,00	9,14
117	9	11,38	0,1637	Sukses	1	11,38	0	0,1362	0	9,00	9,14
118	9	8,87	0,1227	Gagal	0	0	8,87	0	0,1227	8,87	8,99
119	9	9,41	0,1314	Sukses	1	9,41	0	0,1362	0	9,00	9,14
120	9	11,38	0,1637	Sukses	1	11,38	0	0,1362	0	9,00	9,14
121	9	9,88	0,1389	Sukses	1	9,88	0	0,1362	0	9,00	9,14
122	9	11,2	0,1606	Sukses	1	11,2	0	0,1362	0	9,00	9,14
123	9	9,38	0,1308	Sukses	1	9,38	0	0,1362	0	9,00	9,14
124	9	9,34	0,1302	Sukses	1	9,34	0	0,1362	0	9,00	9,14
125	9	8,42	0,1155	Gagal	0	0	8,42	0	0,1155	8,42	8,54
126	9	9,34	0,1302	Sukses	1	9,34	0	0,1362	0	9,00	9,14
127	9	9,49	0,1327	Sukses	1	9,49	0	0,1362	0	9,00	9,14
128	9	7,98	0,1086	Gagal	0	0	7,98	0	0,1086	7,98	8,09
129	9	8,5	0,1167	Gagal	0	0	8,5	0	0,1167	8,50	8,62

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
130	9	8,46	0,1161	Gagal	0	0	8,46	0	0,1161	8,46	8,58
131	9	9,65	0,1351	Sukses	1	9,65	0	0,1362	0	9,00	9,14
132	9	10,84	0,1547	Sukses	1	10,84	0	0,1362	0	9,00	9,14
133	9	7,91	0,1074	Gagal	0	0	7,91	0	0,1074	7,91	8,02
134	9	10,33	0,1463	Sukses	1	10,33	0	0,1362	0	9,00	9,14
135	9	7,84	0,1063	Gagal	0	0	7,84	0	0,1063	7,84	7,95
136	9	9,99	0,1408	Sukses	1	9,99	0	0,1362	0	9,00	9,14
137	9	10,98	0,1570	Sukses	1	10,98	0	0,1362	0	9,00	9,14
138	9	9,53	0,1333	Sukses	1	9,53	0	0,1362	0	9,00	9,14
139	9	8,31	0,1137	Gagal	0	0	8,31	0	0,1137	8,31	8,42
140	9	10,52	0,1493	Sukses	1	10,52	0	0,1362	0	9,00	9,14
141	9	8,76	0,1209	Gagal	0	0	8,76	0	0,1209	8,76	8,88
142	9	10,88	0,1553	Sukses	1	10,88	0	0,1362	0	9,00	9,14
143	9	8,09	0,1103	Gagal	0	0	8,09	0	0,1103	8,09	8,20
144	9	10,22	0,1445	Sukses	1	10,22	0	0,1362	0	9,00	9,14
145	9	9,95	0,1401	Sukses	1	9,95	0	0,1362	0	9,00	9,14
146	9	9,38	0,1308	Sukses	1	9,38	0	0,1362	0	9,00	9,14
147	9	11,41	0,1642	Sukses	1	11,41	0	0,1362	0	9,00	9,14
148	9	8,31	0,1137	Gagal	0	0	8,31	0	0,1137	8,31	8,42

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
149	9	11,22	0,1609	Sukses	1	11,22	0	0,1362	0	9,00	9,14
150	9	10,7	0,1523	Sukses	1	10,7	0	0,1362	0	9,00	9,14



## Lampiran 25 Hasil Simulasi Komponen As Cutter

## Simulasi Monte Carlo Komponen As Cutter Dengan Skenario Interval Waktu Perawatan 170 Hari

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	170	24,72	0,5485	Gagal	0	0	24,72	0	0,5485	24,72	25,27
2	170	45,96	0,5504	Gagal	0	0	45,964	0	0,5504	45,96	46,51
3	170	30,47	0,5576	Gagal	0	0	30,465	0	0,5576	30,47	31,02
4	170	3,39	0,5833	Gagal	0	0	3,391	0	0,5833	3,39	3,97
5	170	44,30	0,6135	Gagal	0	0	44,304	0	0,6135	44,30	44,92
6	170	136,57	0,6296	Gagal	0	0	136,567	0	0,6296	136,57	137,20
7	170	227,16	0,6467	Sukses	1	227,156	0	0,7963	0	170,00	170,80
8	170	170,79	0,6482	Sukses	1	170,794	0	0,7963	0	170,00	170,80
9	170	6,00	0,6630	Gagal	0	0	5,997	0	0,6630	6,00	6,66
10	170	367,97	0,6704	Sukses	1	367,967	0	0,7963	0	170,00	170,80
11	170	243,12	0,6722	Sukses	1	243,119	0	0,7963	0	170,00	170,80
12	170	594,45	0,6736	Sukses	1	594,452	0	0,7963	0	170,00	170,80
13	170	267,35	0,6758	Sukses	1	267,349	0	0,7963	0	170,00	170,80
14	170	391,50	0,6759	Sukses	1	391,496	0	0,7963	0	170,00	170,80
15	170	56,51	0,6798	Gagal	0	0	56,508	0	0,6798	56,51	57,19
16	170	72,96	0,6982	Gagal	0	0	72,964	0	0,6982	72,96	73,66

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
17	170	221,23	0,7039	Sukses	1	221,23	0	0,7963	0	170,00	170,80
18	170	394,37	0,7072	Sukses	1	394,373	0	0,7963	0	170,00	170,80
19	170	61,78	0,7208	Gagal	0	0	61,776	0	0,7208	61,78	62,50
20	170	373,89	0,7280	Sukses	1	373,887	0	0,7963	0	170,00	170,80
21	170	228,65	0,7354	Sukses	1	228,649	0	0,7963	0	170,00	170,80
22	170	40,09	0,9760	Gagal	0	0	40,086	0	0,9760	40,09	41,06
23	170	247,31	1,0384	Sukses	1	247,308	0	0,7963	0	170,00	170,80
24	170	118,86	1,0090	Gagal	0	0	118,863	0	1,0090	118,86	119,87
25	170	72,64	0,9915	Gagal	0	0	72,639	0	0,9915	72,64	73,63
26	170	105,19	1,0041	Gagal	0	0	105,187	0	1,0041	105,19	106,19
27	170	397,43	1,0542	Sukses	1	397,431	0	0,7963	0	170,00	170,80
28	170	487,60	1,0588	Sukses	1	487,595	0	0,7963	0	170,00	170,80
29	170	80,08	0,9941	Gagal	0	0	80,075	0	0,9941	80,08	81,07
30	170	363,87	1,0514	Sukses	1	363,873	0	0,7963	0	170,00	170,80
31	170	15,52	0,9628	Gagal	0	0	15,52	0	0,9628	15,52	16,48
32	170	79,43	0,9941	Gagal	0	0	79,432	0	0,9941	79,43	80,43
33	170	81,03	0,9953	Gagal	0	0	81,027	0	0,9953	81,03	82,02
34	170	495,50	1,0588	Sukses	1	495,504	0	0,7963	0	170,00	170,80
35	170	58,60	0,9851	Gagal	0	0	58,599	0	0,9851	58,60	59,58

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
36	170	148,43	0,6759	Gagal	0	0	148,425	0	0,6759	148,43	149,10
37	170	468,45	0,5965	Sukses	1	468,451	0	0,7963	0	170,00	170,80
38	170	80,29	0,6793	Gagal	0	0	80,29	0	0,6793	80,29	80,97
39	170	148,64	0,6963	Gagal	0	0	148,638	0	0,6963	148,64	149,33
40	170	225,98	0,6598	Sukses	1	225,982	0	0,7963	0	170,00	170,80
41	170	21,96	0,9655	Gagal	0	0	21,964	0	0,9655	21,96	22,93
42	170	244,33	0,6667	Sukses	1	244,327	0	0,7963	0	170,00	170,80
43	170	287,77	0,7128	Sukses	1	287,771	0	0,7963	0	170,00	170,80
44	170	1,83	0,9535	Gagal	0	0	1,825	0	0,9535	1,83	2,78
45	170	736,75	0,7260	Sukses	1	736,751	0	0,7963	0	170,00	170,80
46	170	0,44	0,9535	Gagal	0	0	0,439	0	0,9535	0,44	1,39
47	170	38,45	0,9747	Gagal	0	0	38,447	0	0,9747	38,45	39,42
48	170	452,73	0,6402	Sukses	1	452,731	0	0,7963	0	170,00	170,80
49	170	341,18	0,5243	Sukses	1	341,184	0	0,7963	0	170,00	170,80
50	170	4,99	0,9562	Gagal	0	0	4,989	0	0,9562	4,99	5,95
51	170	66,26	0,9890	Gagal	0	0	66,26	0	0,9890	66,26	67,25
52	170	249,02	0,6822	Sukses	1	249,022	0	0,7963	0	170,00	170,80
53	170	80,51	0,9941	Gagal	0	0	80,505	0	0,9941	80,51	81,50
54	170	674,01	0,6814	Sukses	1	674,006	0	0,7963	0	170,00	170,80

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
55	170	880,14	0,6891	Sukses	1	880,135	0	0,7963	0	170,00	170,80
56	170	1055,27	0,6909	Sukses	1	1055,265	0	0,7963	0	170,00	170,80
57	170	269,46	0,6781	Sukses	1	269,463	0	0,7963	0	170,00	170,80
58	170	598,08	0,6780	Sukses	1	598,079	0	0,7963	0	170,00	170,80
59	170	97,68	0,5779	Gagal	0	0	97,684	0	0,5779	97,68	98,26
60	170	95,76	0,9884	Gagal	0	0	95,759	0	0,9884	95,76	96,75
61	170	81,74	0,9953	Gagal	0	0	81,737	0	0,9953	81,74	82,73
62	170	50,22	0,9812	Gagal	0	0	50,224	0	0,9812	50,22	51,21
63	170	79,65	0,9941	Gagal	0	0	79,646	0	0,9941	79,65	80,64
64	170	5,80	0,9562	Gagal	0	0	5,804	0	0,9562	5,80	6,76
65	170	256,59	0,7290	Sukses	1	256,588	0	0,7963	0	170,00	170,80
66	170	21,01	0,5053	Gagal	0	0	21,014	0	0,5053	21,01	21,52
67	170	227,96	0,5758	Sukses	1	227,963	0	0,7963	0	170,00	170,80
68	170	160,19	0,5743	Gagal	0	0	160,186	0	0,5743	160,19	160,76
69	170	395,20	0,6726	Sukses	1	395,203	0	0,7963	0	170,00	170,80
70	170	12,00	0,6724	Gagal	0	0	11,995	0	0,6724	12,00	12,67
71	170	394,37	0,6575	Sukses	1	394,373	0	0,7963	0	170,00	170,80
72	170	371,03	0,6263	Sukses	1	371,029	0	0,7963	0	170,00	170,80
73	170	216,64	0,6891	Sukses	1	216,642	0	0,7963	0	170,00	170,80

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
74	170	711,36	0,6724	Sukses	1	711,358	0	0,7963	0	170,00	170,80
75	170	248,47	0,6906	Sukses	1	248,472	0	0,7963	0	170,00	170,80
76	170	302,17	0,6702	Sukses	1	302,172	0	0,7963	0	170,00	170,80
77	170	112,29	0,6905	Gagal	0	0	112,288	0	0,6905	112,29	112,98
78	170	129,81	0,6242	Gagal	0	0	129,809	0	0,6242	129,81	130,43
79	170	566,87	0,5941	Sukses	1	566,872	0	0,7963	0	170,00	170,80
80	170	16,02	0,9628	Gagal	0	0	16,016	0	0,9628	16,02	16,98
81	170	181,22	0,6874	Sukses	1	181,223	0	0,7963	0	170,00	170,80
82	170	37,82	0,9747	Gagal	0	0	37,82	0	0,9747	37,82	38,79
83	170	309,30	0,6538	Sukses	1	309,303	0	0,7963	0	170,00	170,80
84	170	5,61	0,9562	Gagal	0	0	5,611	0	0,9562	5,61	6,57
85	170	815,16	0,5404	Sukses	1	815,155	0	0,7963	0	170,00	170,80
86	170	15,14	0,9615	Gagal	0	0	15,138	0	0,9615	15,14	16,10
87	170	10,43	0,9602	Gagal	0	0	10,43	0	0,9602	10,43	11,39
88	170	253,68	0,6722	Sukses	1	253,683	0	0,7963	0	170,00	170,80
89	170	330,24	0,6702	Sukses	1	330,244	0	0,7963	0	170,00	170,80
90	170	73,56	0,9915	Gagal	0	0	73,558	0	0,9915	73,56	74,55
91	170	44,95	0,9786	Gagal	0	0	44,951	0	0,9786	44,95	45,93
92	170	44,38	0,9786	Gagal	0	0	44,382	0	0,9786	44,38	45,36

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
93	170	350,82	0,5037	Sukses	1	350,816	0	0,7963	0	170,00	170,80
94	170	11,38	0,9602	Gagal	0	0	11,376	0	0,9602	11,38	12,34
95	170	36,00	0,9734	Gagal	0	0	36,001	0	0,9734	36,00	36,97
96	170	368,70	0,7190	Sukses	1	368,698	0	0,7963	0	170,00	170,80
97	170	283,67	0,6707	Sukses	1	283,67	0	0,7963	0	170,00	170,80
98	170	579,87	0,6557	Sukses	1	579,872	0	0,7963	0	170,00	170,80
99	170	93,98	0,6522	Gagal	0	0	93,983	0	0,6522	93,98	94,64
100	170	487,38	0,6736	Sukses	1	487,38	0	0,7963	0	170,00	170,80
101	170	222,14	0,6854	Sukses	1	222,135	0	0,7963	0	170,00	170,80
102	170	296,31	0,6690	Sukses	1	296,309	0	0,7963	0	170,00	170,80
103	170	1065,29	0,7040	Sukses	1	1065,294	0	0,7963	0	170,00	170,80
104	170	81,03	0,5720	Gagal	0	0	81,027	0	0,5720	81,03	81,60
105	170	75,47	0,6690	Gagal	0	0	75,468	0	0,6690	75,47	76,14
106	170	58,90	0,9851	Gagal	0	0	58,903	0	0,9851	58,90	59,89
107	170	182,12	0,6690	Sukses	1	182,121	0	0,7963	0	170,00	170,80
108	170	89,77	0,6539	Gagal	0	0	89,767	0	0,6539	89,77	90,42
109	170	262,74	0,6685	Sukses	1	262,743	0	0,7963	0	170,00	170,80
110	170	156,22	1,0196	Gagal	0	0	156,221	0	1,0196	156,22	157,24
111	170	110,86	1,0065	Gagal	0	0	110,862	0	1,0065	110,86	111,87

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
112	170	118,16	1,0090	Gagal	0	0	118,163	0	1,0090	118,16	119,17
113	170	152,63	1,0185	Gagal	0	0	152,633	0	1,0185	152,63	153,65
114	170	238,03	1,0374	Sukses	1	238,031	0	0,7963	0	170,00	170,80
115	170	120,16	1,0028	Gagal	0	0	120,158	0	1,0028	120,16	121,16
116	170	100,17	1,0028	Gagal	0	0	100,167	0	1,0028	100,17	101,17
117	170	724,34	1,0639	Sukses	1	724,337	0	0,7963	0	170,00	170,80
118	170	69,06	0,9903	Gagal	0	0	69,061	0	0,9903	69,06	70,05
119	170	114,77	1,0077	Gagal	0	0	114,77	0	1,0077	114,77	115,78
120	170	700,93	1,0639	Sukses	1	700,926	0	0,7963	0	170,00	FALSE
121	170	166,76	1,0220	Gagal	0	0	166,764	0	1,0220	166,76	167,79
122	170	466,10	1,0590	Sukses	1	466,103	0	0,7963	0	170,00	170,80
123	170	110,76	1,0065	Gagal	0	0	110,756	0	1,0065	110,76	111,76
124	170	109,17	1,0053	Gagal	0	0	109,165	0	1,0053	109,17	110,17
125	170	38,70	0,9747	Gagal	0	0	38,698	0	0,9747	38,70	39,67
126	170	108,60	1,0053	Gagal	0	0	108,602	0	1,0053	108,60	109,61
127	170	122,10	1,0102	Gagal	0	0	122,098	0	1,0102	122,10	123,11
128	170	9,93	0,9588	Gagal	0	0	9,925	0	0,9588	9,93	10,88
129	170	42,22	0,9773	Gagal	0	0	42,223	0	0,9773	42,22	43,20
130	170	39,78	0,9760	Gagal	0	0	39,782	0	0,9760	39,78	40,76

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
131	170	139,85	0,6999	Gagal	0	0	139,846	0	0,6999	139,85	140,55
132	170	346,71	0,6685	Sukses	1	346,712	0	0,7963	0	170,00	170,80
133	170	4,82	0,9562	Gagal	0	0	4,818	0	0,9562	4,82	5,77
134	170	228,71	0,5035	Sukses	1	228,711	0	0,7963	0	170,00	170,80
135	170	1,80	0,9535	Gagal	0	0	1,804	0	0,9535	1,80	2,76
136	170	180,18	1,0254	Sukses	1	180,182	0	0,7963	0	170,00	170,80
137	170	380,88	0,5869	Sukses	1	380,882	0	0,7963	0	170,00	170,80
138	170	125,99	0,6231	Gagal	0	0	125,994	0	0,6231	125,99	126,62
139	170	30,35	0,9708	Gagal	0	0	30,345	0	0,9708	30,35	31,32
140	170	264,29	0,6803	Sukses	1	264,291	0	0,7963	0	170,00	170,80
141	170	62,31	0,9864	Gagal	0	0	62,31	0	0,9864	62,31	63,30
142	170	347,15	0,5095	Sukses	1	347,152	0	0,7963	0	170,00	170,80
143	170	16,60	0,9628	Gagal	0	0	16,603	0	0,9628	16,60	17,57
144	170	209,52	0,5574	Sukses	1	209,517	0	0,7963	0	170,00	170,80
145	170	173,65	0,5722	Sukses	1	173,653	0	0,7963	0	170,00	170,80
146	170	111,47	0,5020	Gagal	0	0	111,467	0	0,5020	111,47	111,97
147	170	760,03	0,5932	Sukses	1	760,028	0	0,7963	0	170,00	170,80
148	170	30,71	0,9708	Gagal	0	0	30,707	0	0,9708	30,71	31,68
149	170	526,33	0,6315	Sukses	1	526,331	0	0,7963	0	170,00	170,80



i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
150	170	300,58	0,6443	Sukses	1	300,58	0	0,7963	0	170,00	170,80

## Lampiran 26 Hasil Simulasi Komponen Welding

## Simulasi Monte Carlo Komponen Welding Dengan Skenario Interval Waktu Perawatan 43 Hari

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	43	31,75	0,3130	Gagal	0	0	31,75	0	0,3130	31,75	32,06
2	43	33,56	0,3287	Gagal	0	0	33,56	0	0,3287	33,56	33,89
3	43	32,15	0,3165	Gagal	0	0	32,15	0	0,3165	32,15	32,47
4	43	29,85	0,2963	Gagal	0	0	29,85	0	0,2963	29,85	30,15
5	43	33,36	0,3269	Gagal	0	0	33,36	0	0,3269	33,36	33,69
6	43	39,52	0,3799	Gagal	0	0	39,52	0	0,3799	39,52	39,90
7	43	43,46	0,4132	Sukses	1	43,46	0	0,3831	0	43,00	43,38
8	43	41,28	0,3947	Gagal	0	0	41,28	0	0,3947	41,28	41,67
9	43	30,22	0,2996	Gagal	0	0	30,22	0	0,2996	30,22	30,52
10	43	46,87	0,4417	Sukses	1	46,87	0	0,3831	0	43,00	43,38
11	43	44,12	0,4187	Sukses	1	44,12	0	0,3831	0	43,00	43,38
12	43	49,3	0,4619	Sukses	1	49,3	0	0,3831	0	43,00	43,38
13	43	44,64	0,4230	Sukses	1	44,64	0	0,3831	0	43,00	43,38
14	43	47,29	0,4452	Sukses	1	47,29	0	0,3831	0	43,00	43,38
15	43	34,18	0,3340	Gagal	0	0	34,18	0	0,3340	34,18	34,51
16	43	35,43	0,3448	Gagal	0	0	35,43	0	0,3448	35,43	35,77

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
17	43	43,25	0,4113	Sukses	1	43,25	0	0,3831	0	43,00	43,38
18	43	47,5	0,4469	Sukses	1	47,5	0	0,3831	0	43,00	43,38
19	43	34,59	0,3376	Gagal	0	0	34,59	0	0,3376	34,59	34,93
20	43	47,08	0,4435	Sukses	1	47,08	0	0,3831	0	43,00	43,38
21	43	43,46	0,4132	Sukses	1	43,46	0	0,3831	0	43,00	43,38
22	43	32,95	0,3234	Gagal	0	0	32,95	0	0,3234	32,95	33,27
23	43	44,12	0,4187	Sukses	1	44,12	0	0,3831	0	43,00	43,38
24	43	38,44	0,3706	Gagal	0	0	38,44	0	0,3706	38,44	38,81
25	43	35,43	0,3448	Gagal	0	0	35,43	0	0,3448	35,43	35,77
26	43	37,57	0,3632	Gagal	0	0	37,57	0	0,3632	37,57	37,93
27	43	47,5	0,4469	Sukses	1	47,5	0	0,3831	0	43,00	43,38
28	43	48,51	0,4553	Sukses	1	48,51	0	0,3831	0	43,00	43,38
29	43	35,85	0,3485	Gagal	0	0	35,85	0	0,3485	35,85	36,20
30	43	46,87	0,4417	Sukses	1	46,87	0	0,3831	0	43,00	43,38
31	43	30,98	0,3063	Gagal	0	0	30,98	0	0,3063	30,98	31,29
32	43	35,85	0,3485	Gagal	0	0	35,85	0	0,3485	35,85	36,20
33	43	36,07	0,3503	Gagal	0	0	36,07	0	0,3503	36,07	36,42
34	43	48,51	0,4553	Sukses	1	48,51	0	0,3831	0	43,00	43,38
35	43	34,38	0,3358	Gagal	0	0	34,38	0	0,3358	34,38	34,72

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
36	43	40,18	0,3855	Gagal	0	0	40,18	0	0,3855	40,18	40,57
37	43	48,31	0,4537	Sukses	1	48,31	0	0,3831	0	43,00	43,38
38	43	35,85	0,3485	Gagal	0	0	35,85	0	0,3485	35,85	36,20
39	43	40,18	0,3855	Gagal	0	0	40,18	0	0,3855	40,18	40,57
40	43	43,46	0,4132	Sukses	1	43,46	0	0,3831	0	43,00	43,38
41	43	31,37	0,3096	Gagal	0	0	31,37	0	0,3096	31,37	31,68
42	43	44,12	0,4187	Sukses	1	44,12	0	0,3831	0	43,00	43,38
43	43	45,4	0,4294	Sukses	1	45,4	0	0,3831	0	43,00	43,38
44	43	29,66	0,2947	Gagal	0	0	29,66	0	0,2947	29,66	29,95
45	43	49,89	0,4668	Sukses	1	49,89	0	0,3831	0	43,00	43,38
46	43	29,66	0,2947	Gagal	0	0	29,66	0	0,2947	29,66	29,95
47	43	32,75	0,3217	Gagal	0	0	32,75	0	0,3217	32,75	33,07
48	43	48,11	0,4520	Sukses	1	48,11	0	0,3831	0	43,00	43,38
49	43	46,46	0,4382	Sukses	1	46,46	0	0,3831	0	43,00	43,38
50	43	30,03	0,2980	Gagal	0	0	30,03	0	0,2980	30,03	30,33
51	43	35,01	0,3412	Gagal	0	0	35,01	0	0,3412	35,01	35,35
52	43	44,12	0,4187	Sukses	1	44,12	0	0,3831	0	43,00	43,38
53	43	35,85	0,3485	Gagal	0	0	35,85	0	0,3485	35,85	36,20
54	43	49,7	0,4652	Sukses	1	49,7	0	0,3831	0	43,00	43,38

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
55	43	50,09	0,4684	Sukses	1	50,09	0	0,3831	0	43,00	43,38
56	43	50,28	0,4700	Sukses	1	50,28	0	0,3831	0	43,00	43,38
57	43	44,76	0,4241	Sukses	1	44,76	0	0,3831	0	43,00	43,38
58	43	49,3	0,4619	Sukses	1	49,3	0	0,3831	0	43,00	43,38
59	43	37,14	0,3595	Gagal	0	0	37,14	0	0,3595	37,14	37,50
60	43	34,91	0,3403	Gagal	0	0	34,91	0	0,3403	34,91	35,25
61	43	36,07	0,3503	Gagal	0	0	36,07	0	0,3503	36,07	36,42
62	43	33,76	0,3305	Gagal	0	0	33,76	0	0,3305	33,76	34,09
63	43	35,85	0,3485	Gagal	0	0	35,85	0	0,3485	35,85	36,20
64	43	30,03	0,2980	Gagal	0	0	30,03	0	0,2980	30,03	30,33
65	43	44,33	0,4204	Sukses	1	44,33	0	0,3831	0	43,00	43,38
66	43	31,37	0,3096	Gagal	0	0	31,37	0	0,3096	31,37	31,68
67	43	43,46	0,4132	Sukses	1	43,46	0	0,3831	0	43,00	43,38
68	43	40,62	0,3892	Gagal	0	0	40,62	0	0,3892	40,62	41,01
69	43	47,29	0,4452	Sukses	1	47,29	0	0,3831	0	43,00	43,38
70	43	30,6	0,3029	Gagal	0	0	30,6	0	0,3029	30,60	30,90
71	43	47,29	0,4452	Sukses	1	47,29	0	0,3831	0	43,00	43,38
72	43	47,08	0,4435	Sukses	1	47,08	0	0,3831	0	43,00	43,38
73	43	43,03	0,4095	Sukses	1	43,03	0	0,3831	0	43,00	43,38

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
74	43	49,7	0,4652	Sukses	1	49,7	0	0,3831	0	43,00	43,38
75	43	44,33	0,4204	Sukses	1	44,33	0	0,3831	0	43,00	43,38
76	43	45,83	0,4330	Sukses	1	45,83	0	0,3831	0	43,00	43,38
77	43	38	0,3669	Gagal	0	0	38	0	0,3669	38,00	38,37
78	43	39,09	0,3762	Gagal	0	0	39,09	0	0,3762	39,09	39,47
79	43	49,11	0,4603	Sukses	1	49,11	0	0,3831	0	43,00	43,38
80	43	30,98	0,3063	Gagal	0	0	30,98	0	0,3063	30,98	31,29
81	43	41,72	0,3985	Gagal	0	0	41,72	0	0,3985	41,72	42,12
82	43	32,75	0,3217	Gagal	0	0	32,75	0	0,3217	32,75	33,07
83	43	45,83	0,4330	Sukses	1	45,83	0	0,3831	0	43,00	43,38
84	43	30,03	0,2980	Gagal	0	0	30,03	0	0,2980	30,03	30,33
85	43	49,89	0,4668	Sukses	1	49,89	0	0,3831	0	43,00	43,38
86	43	30,79	0,3046	Gagal	0	0	30,79	0	0,3046	30,79	31,09
87	43	30,6	0,3029	Gagal	0	0	30,6	0	0,3029	30,60	30,90
88	43	44,33	0,4204	Sukses	1	44,33	0	0,3831	0	43,00	43,38
89	43	46,25	0,4365	Sukses	1	46,25	0	0,3831	0	43,00	43,38
90	43	35,43	0,3448	Gagal	0	0	35,43	0	0,3448	35,43	35,77
91	43	33,36	0,3269	Gagal	0	0	33,36	0	0,3269	33,36	33,69
92	43	33,36	0,3269	Gagal	0	0	33,36	0	0,3269	33,36	33,69

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
93	43	46,67	0,4400	Sukses	1	46,67	0	0,3831	0	43,00	43,38
94	43	30,6	0,3029	Gagal	0	0	30,6	0	0,3029	30,60	30,90
95	43	32,55	0,3199	Gagal	0	0	32,55	0	0,3199	32,55	32,87
96	43	46,87	0,4417	Sukses	1	46,87	0	0,3831	0	43,00	43,38
97	43	45,19	0,4276	Sukses	1	45,19	0	0,3831	0	43,00	43,38
98	43	49,11	0,4603	Sukses	1	49,11	0	0,3831	0	43,00	43,38
99	43	36,92	0,3576	Gagal	0	0	36,92	0	0,3576	36,92	37,28
100	43	48,51	0,4553	Sukses	1	48,51	0	0,3831	0	43,00	43,38
101	43	43,25	0,4113	Sukses	1	43,25	0	0,3831	0	43,00	43,38
102	43	45,4	0,4294	Sukses	1	45,4	0	0,3831	0	43,00	43,38
103	43	42,59	0,4058	Gagal	0	0	42,59	0	0,4058	42,59	43,00
104	43	35,9	0,3489	Gagal	0	0	35,9	0	0,3489	35,90	36,25
105	43	35,64	0,3467	Gagal	0	0	35,64	0	0,3467	35,64	35,99
106	43	34,38	0,3358	Gagal	0	0	34,38	0	0,3358	34,38	34,72
107	43	41,72	0,3985	Gagal	0	0	41,72	0	0,3985	41,72	42,12
108	43	36,49	0,3540	Gagal	0	0	36,49	0	0,3540	36,49	36,84
109	43	44,54	0,4222	Sukses	1	44,54	0	0,3831	0	43,00	43,38
110	43	40,4	0,3873	Gagal	0	0	40,4	0	0,3873	40,40	40,79
111	43	38	0,3669	Gagal	0	0	38	0	0,3669	38,00	38,37

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
112	43	38,44	0,3706	Gagal	0	0	38,44	0	0,3706	38,44	38,81
113	43	40,18	0,3855	Gagal	0	0	40,18	0	0,3855	40,18	40,57
114	43	43,9	0,4168	Sukses	1	43,9	0	0,3831	0	43,00	43,38
115	43	37,35	0,3613	Gagal	0	0	37,35	0	0,3613	37,35	37,71
116	43	37,35	0,3613	Gagal	0	0	37,35	0	0,3613	37,35	37,71
117	43	49,7	0,4652	Sukses	1	49,7	0	0,3831	0	43,00	43,38
118	43	35,22	0,3430	Gagal	0	0	35,22	0	0,3430	35,22	35,56
119	43	38,22	0,3687	Gagal	0	0	38,22	0	0,3687	38,22	38,59
120	43	49,7	0,4652	Sukses	1	49,7	0	0,3831	0	43,00	43,38
121	43	40,84	0,3911	Gagal	0	0	40,84	0	0,3911	40,84	41,23
122	43	48,57	0,4558	Sukses	1	48,57	0	0,3831	0	43,00	43,38
123	43	38	0,3669	Gagal	0	0	38	0	0,3669	38,00	38,37
124	43	37,79	0,3651	Gagal	0	0	37,79	0	0,3651	37,79	38,16
125	43	32,75	0,3217	Gagal	0	0	32,75	0	0,3217	32,75	33,07
126	43	37,79	0,3651	Gagal	0	0	37,79	0	0,3651	37,79	38,16
127	43	38,65	0,3725	Gagal	0	0	38,65	0	0,3725	38,65	39,02
128	43	30,41	0,3013	Gagal	0	0	30,41	0	0,3013	30,41	30,71
129	43	33,15	0,3252	Gagal	0	0	33,15	0	0,3252	33,15	33,48
130	43	32,95	0,3234	Gagal	0	0	32,95	0	0,3234	32,95	33,27



i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
131	43	39,52	0,3799	Gagal	0	0	39,52	0	0,3799	39,52	39,90
132	43	46,46	0,4382	Sukses	1	46,46	0	0,3831	0	43,00	43,38
133	43	30,03	0,2980	Gagal	0	0	30,03	0	0,2980	30,03	30,33
134	43	43,46	0,4132	Sukses	1	43,46	0	0,3831	0	43,00	43,38
135	43	29,66	0,2947	Gagal	0	0	29,66	0	0,2947	29,66	29,95
136	43	41,5	0,3966	Gagal	0	0	41,5	0	0,3966	41,50	41,90
137	43	47,29	0,4452	Sukses	1	47,29	0	0,3831	0	43,00	43,38
138	43	38,87	0,3743	Gagal	0	0	38,87	0	0,3743	38,87	39,24
139	43	32,15	0,3165	Gagal	0	0	32,15	0	0,3165	32,15	32,47
140	43	44,54	0,4222	Sukses	1	44,54	0	0,3831	0	43,00	43,38
141	43	34,59	0,3376	Gagal	0	0	34,59	0	0,3376	34,59	34,93
142	43	46,67	0,4400	Sukses	1	46,67	0	0,3831	0	43,00	43,38
143	43	30,98	0,3063	Gagal	0	0	30,98	0	0,3063	30,98	31,29
144	43	42,81	0,4077	Gagal	0	0	42,81	0	0,4077	42,81	43,22
145	43	41,28	0,3947	Gagal	0	0	41,28	0	0,3947	41,28	41,67
146	43	38	0,3669	Gagal	0	0	38	0	0,3669	38,00	38,37
147	43	49,89	0,4668	Sukses	1	49,89	0	0,3831	0	43,00	43,38
148	43	32,15	0,3165	Gagal	0	0	32,15	0	0,3165	32,15	32,47
149	43	48,71	0,4570	Sukses	1	48,71	0	0,3831	0	43,00	43,38

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
150	43	45,61	0,4312	Sukses	1	45,61	0	0,3831	0	43,00	43,38

## Lampiran 27 Hasil Simulasi Komponen Water Pump

## Simulasi Monte Carlo Komponen Water Pump Dengan Skenario Interval Waktu Perawatan 32 Hari

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	32	25,24	0,1645	Gagal	0	0	25,24	0	0,1645	25,24	25,40
2	32	26,28	0,1717	Gagal	0	0	26,28	0	0,1717	26,28	26,45
3	32	25,47	0,1661	Gagal	0	0	25,47	0	0,1661	25,47	25,64
4	32	24,13	0,1568	Gagal	0	0	24,13	0	0,1568	24,13	24,29
5	32	26,17	0,1708	Gagal	0	0	26,17	0	0,1708	26,17	26,34
6	32	29,61	0,1948	Gagal	0	0	29,61	0	0,1948	29,61	29,80
7	32	31,73	0,2097	Gagal	0	0	31,73	0	0,2097	31,73	31,94
8	32	30,56	0,2015	Gagal	0	0	30,56	0	0,2015	30,56	30,76
9	32	24,35	0,1583	Gagal	0	0	24,35	0	0,1583	24,35	24,51
10	32	33,53	0,2223	Sukses	1	33,53	0	0,1960	0	32,00	32,20
11	32	32,08	0,2121	Sukses	1	32,08	0	0,1960	0	32,00	32,20
12	32	34,79	0,2312	Sukses	1	34,79	0	0,1960	0	32,00	32,20
13	32	32,36	0,2141	Sukses	1	32,36	0	0,1960	0	32,00	32,20
14	32	33,75	0,2238	Sukses	1	33,75	0	0,1960	0	32,00	32,20
15	32	26,63	0,1741	Gagal	0	0	26,63	0	0,1741	26,63	26,80
16	32	27,34	0,1790	Gagal	0	0	27,34	0	0,1790	27,34	27,52

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
17	32	31,62	0,2089	Gagal	0	0	31,62	0	0,2089	31,62	31,83
18	32	33,85	0,2246	Sukses	1	33,85	0	0,1960	0	32,00	32,20
19	32	26,87	0,1757	Gagal	0	0	26,87	0	0,1757	26,87	27,05
20	32	33,64	0,2231	Sukses	1	33,64	0	0,1960	0	32,00	32,20
21	32	31,73	0,2097	Gagal	0	0	31,73	0	0,2097	31,73	31,94
22	32	25,93	0,1692	Gagal	0	0	25,93	0	0,1692	25,93	26,10
23	32	32,08	0,2121	Sukses	1	32,08	0	0,1960	0	32,00	32,20
24	32	29,02	0,1907	Gagal	0	0	29,02	0	0,1907	29,02	29,21
25	32	27,34	0,1790	Gagal	0	0	27,34	0	0,1790	27,34	27,52
26	32	28,54	0,1873	Gagal	0	0	28,54	0	0,1873	28,54	28,73
27	32	33,85	0,2246	Sukses	1	33,85	0	0,1960	0	32,00	32,20
28	32	34,38	0,2283	Sukses	1	34,38	0	0,1960	0	32,00	32,20
29	32	27,58	0,1807	Gagal	0	0	27,58	0	0,1807	27,58	27,76
30	32	33,53	0,2223	Sukses	1	33,53	0	0,1960	0	32,00	32,20
31	32	24,79	0,1614	Gagal	0	0	24,79	0	0,1614	24,79	24,95
32	32	27,58	0,1807	Gagal	0	0	27,58	0	0,1807	27,58	27,76
33	32	27,70	0,1815	Gagal	0	0	27,7	0	0,1815	27,70	27,88
34	32	34,38	0,2283	Sukses	1	34,38	0	0,1960	0	32,00	32,20
35	32	26,75	0,1749	Gagal	0	0	26,75	0	0,1749	26,75	26,92

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
36	32	29,97	0,1973	Gagal	0	0	29,97	0	0,1973	29,97	30,17
37	32	34,28	0,2276	Sukses	1	34,28	0	0,1960	0	32,00	32,20
38	32	27,58	0,1807	Gagal	0	0	27,58	0	0,1807	27,58	27,76
39	32	29,97	0,1973	Gagal	0	0	29,97	0	0,1973	29,97	30,17
40	32	31,73	0,2097	Gagal	0	0	31,73	0	0,2097	31,73	31,94
41	32	25,02	0,1629	Gagal	0	0	25,02	0	0,1629	25,02	25,18
42	32	32,08	0,2121	Sukses	1	32,08	0	0,1960	0	32,00	32,20
43	32	32,76	0,2169	Sukses	1	32,76	0	0,1960	0	32,00	32,20
44	32	24,02	0,1560	Gagal	0	0	24,02	0	0,1560	24,02	24,18
45	32	35,09	0,2333	Sukses	1	35,09	0	0,1960	0	32,00	32,20
46	32	24,02	0,1560	Gagal	0	0	24,02	0	0,1560	24,02	24,18
47	32	25,82	0,1684	Gagal	0	0	25,82	0	0,1684	25,82	25,99
48	32	34,17	0,2268	Sukses	1	34,17	0	0,1960	0	32,00	32,20
49	32	33,31	0,2208	Sukses	1	33,31	0	0,1960	0	32,00	32,20
50	32	24,24	0,1575	Gagal	0	0	24,24	0	0,1575	24,24	24,40
51	32	27,11	0,1774	Gagal	0	0	27,1053	0	0,1774	27,11	27,28
52	32	32,08	0,2121	Sukses	1	32,0814	0	0,1960	0	32,00	32,20
53	32	27,58	0,1807	Gagal	0	0	27,5801	0	0,1807	27,58	27,76
54	32	34,99	0,2326	Sukses	1	34,9915	0	0,1960	0	32,00	32,20

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
55	32	35,19	0,2340	Sukses	1	35,1906	0	0,1960	0	32,00	32,20
56	32	35,29	0,2347	Sukses	1	35,2906	0	0,1960	0	32,00	32,20
57	32	32,42	0,2145	Sukses	1	32,4219	0	0,1960	0	32,00	32,20
58	32	34,79	0,2312	Sukses	1	34,7895	0	0,1960	0	32,00	32,20
59	32	28,30	0,1857	Gagal	0	0	28,2967	0	0,1857	28,30	28,48
60	32	27,05	0,1770	Gagal	0	0	27,0469	0	0,1770	27,05	27,22
61	32	27,70	0,1815	Gagal	0	0	27,6993	0	0,1815	27,70	27,88
62	32	26,40	0,1725	Gagal	0	0	26,3979	0	0,1725	26,40	26,57
63	32	27,58	0,1807	Gagal	0	0	27,5801	0	0,1807	27,58	27,76
64	32	24,24	0,1575	Gagal	0	0	24,2383	0	0,1575	24,24	24,40
65	32	32,19	0,2129	Sukses	1	32,1945	0	0,1960	0	32,00	32,20
66	32	25,02	0,1629	Gagal	0	0	25,0181	0	0,1629	25,02	25,18
67	32	31,73	0,2097	Gagal	0	0	31,7338	0	0,2097	31,73	31,94
68	32	30,21	0,1990	Gagal	0	0	30,2085	0	0,1990	30,21	30,41
69	32	33,75	0,2238	Sukses	1	33,7472	0	0,1960	0	32,00	32,20
70	32	24,57	0,1598	Gagal	0	0	24,5706	0	0,1598	24,57	24,73
71	32	33,75	0,2238	Sukses	1	33,7472	0	0,1960	0	32,00	32,20
72	32	33,64	0,2231	Sukses	1	33,6402	0	0,1960	0	32,00	32,20
73	32	31,50	0,2081	Gagal	0	0	31,5041	0	0,2081	31,50	31,71

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
74	32	34,99	0,2326	Sukses	1	34,9915	0	0,1960	0	32,00	32,20
75	32	32,19	0,2129	Sukses	1	32,1945	0	0,1960	0	32,00	32,20
76	32	32,98	0,2185	Sukses	1	32,9823	0	0,1960	0	32,00	32,20
77	32	28,77	0,1890	Gagal	0	0	28,7728	0	0,1890	28,77	28,96
78	32	29,37	0,1932	Gagal	0	0	29,3734	0	0,1932	29,37	29,57
79	32	34,69	0,2305	Sukses	1	34,691	0	0,1960	0	32,00	32,20
80	32	24,79	0,1614	Gagal	0	0	24,7948	0	0,1614	24,79	24,96
81	32	30,80	0,2031	Gagal	0	0	30,8005	0	0,2031	30,80	31,00
82	32	25,82	0,1684	Gagal	0	0	25,8171	0	0,1684	25,82	25,99
83	32	32,98	0,2185	Sukses	1	32,9823	0	0,1960	0	32,00	32,20
84	32	24,24	0,1575	Gagal	0	0	24,2383	0	0,1575	24,24	24,40
85	32	35,09	0,2333	Sukses	1	35,0909	0	0,1960	0	32,00	32,20
86	32	24,68	0,1606	Gagal	0	0	24,6824	0	0,1606	24,68	24,84
87	32	24,57	0,1598	Gagal	0	0	24,5706	0	0,1598	24,57	24,73
88	32	32,19	0,2129	Sukses	1	32,1945	0	0,1960	0	32,00	32,20
89	32	33,20	0,2200	Sukses	1	33,2039	0	0,1960	0	32,00	32,20
90	32	27,34	0,1790	Gagal	0	0	27,3401	0	0,1790	27,34	27,52
91	32	26,17	0,1708	Gagal	0	0	26,1652	0	0,1708	26,17	26,34
92	32	26,17	0,1708	Gagal	0	0	26,1652	0	0,1708	26,17	26,34

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcemi (hari)	Topri (hari)	Tjami (hari)
93	32	33,42	0,2216	Sukses	1	33,4232	0	0,1960	0	32,00	32,20
94	32	24,57	0,1598	Gagal	0	0	24,5706	0	0,1598	24,57	24,73
95	32	25,70	0,1676	Gagal	0	0	25,7031	0	0,1676	25,70	25,87
96	32	33,53	0,2223	Sukses	1	33,5296	0	0,1960	0	32,00	32,20
97	32	32,65	0,2161	Sukses	1	32,6471	0	0,1960	0	32,00	32,20
98	32	34,69	0,2305	Sukses	1	34,691	0	0,1960	0	32,00	32,20
99	32	28,18	0,1848	Gagal	0	0	28,175	0	0,1848	28,18	28,36
100	32	34,38	0,2283	Sukses	1	34,3813	0	0,1960	0	32,00	32,20
101	32	31,62	0,2089	Gagal	0	0	31,6187	0	0,2089	31,62	31,83
102	32	32,76	0,2169	Sukses	1	32,7585	0	0,1960	0	32,00	32,20
103	32	31,27	0,2064	Gagal	0	0	31,269	0	0,2064	31,27	31,48
104	32	27,61	0,1808	Gagal	0	0	27,6052	0	0,1808	27,61	27,79
105	32	27,46	0,1798	Gagal	0	0	27,4614	0	0,1798	27,46	27,64
106	32	26,75	0,1749	Gagal	0	0	26,7508	0	0,1749	26,75	26,93
107	32	30,80	0,2031	Gagal	0	0	30,8005	0	0,2031	30,80	31,00
108	32	27,94	0,1832	Gagal	0	0	27,9361	0	0,1832	27,94	28,12
109	32	32,31	0,2137	Sukses	1	32,308	0	0,1960	0	32,00	32,20
110	32	30,09	0,1982	Gagal	0	0	30,0887	0	0,1982	30,09	30,29
111	32	28,77	0,1890	Gagal	0	0	28,7728	0	0,1890	28,77	28,96



i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
112	32	29,02	0,1907	Gagal	0	0	29,0155	0	0,1907	29,02	29,21
113	32	29,97	0,1973	Gagal	0	0	29,9694	0	0,1973	29,97	30,17
114	32	31,97	0,2113	Gagal	0	0	31,9651	0	0,2113	31,97	32,18
115	32	28,42	0,1865	Gagal	0	0	28,4158	0	0,1865	28,42	28,60
116	32	28,42	0,1865	Gagal	0	0	28,4158	0	0,1865	28,42	28,60
117	32	34,99	0,2326	Sukses	1	34,9915	0	0,1960	0	32,00	32,20
118	32	27,22	0,1782	Gagal	0	0	27,2225	0	0,1782	27,22	27,40
119	32	28,89	0,1898	Gagal	0	0	28,8939	0	0,1898	28,89	29,08
120	32	34,99	0,2326	Sukses	1	34,9915	0	0,1960	0	32,00	32,20
121	32	30,33	0,1998	Gagal	0	0	30,3287	0	0,1998	30,33	30,53
122	32	34,41	0,2285	Sukses	1	34,4125	0	0,1960	0	32,00	32,20
123	32	28,77	0,1890	Gagal	0	0	28,7728	0	0,1890	28,77	28,96
124	32	28,66	0,1882	Gagal	0	0	28,6555	0	0,1882	28,66	28,84
125	32	25,82	0,1684	Gagal	0	0	25,8171	0	0,1684	25,82	25,99
126	32	28,66	0,1882	Gagal	0	0	28,6555	0	0,1882	28,66	28,84
127	32	29,13	0,1915	Gagal	0	0	29,1343	0	0,1915	29,13	29,33
128	32	24,46	0,1590	Gagal	0	0	24,4593	0	0,1590	24,46	24,62
129	32	26,05	0,1700	Gagal	0	0	26,0497	0	0,1700	26,05	26,22
130	32	25,93	0,1692	Gagal	0	0	25,9317	0	0,1692	25,93	26,10

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
131	32	29,61	0,1948	Gagal	0	0	29,611	0	0,1948	29,61	29,81
132	32	33,31	0,2208	Sukses	1	33,3134	0	0,1960	0	32,00	32,20
133	32	24,24	0,1575	Gagal	0	0	24,2383	0	0,1575	24,24	24,40
134	32	31,73	0,2097	Gagal	0	0	31,7338	0	0,2097	31,73	31,94
135	32	24,02	0,1560	Gagal	0	0	24,0219	0	0,1560	24,02	24,18
136	32	30,68	0,2023	Gagal	0	0	30,6819	0	0,2023	30,68	30,88
137	32	33,75	0,2238	Sukses	1	33,7472	0	0,1960	0	32,00	32,20
138	32	29,25	0,1923	Gagal	0	0	29,2536	0	0,1923	29,25	29,45
139	32	25,47	0,1661	Gagal	0	0	25,4737	0	0,1661	25,47	25,64
140	32	32,31	0,2137	Sukses	1	32,308	0	0,1960	0	32,00	32,20
141	32	26,87	0,1757	Gagal	0	0	26,8695	0	0,1757	26,87	27,05
142	32	33,42	0,2216	Sukses	1	33,4232	0	0,1960	0	32,00	32,20
143	32	24,79	0,1614	Gagal	0	0	24,7948	0	0,1614	24,79	24,96
144	32	31,39	0,2073	Gagal	0	0	31,3863	0	0,2073	31,39	31,59
145	32	30,56	0,2015	Gagal	0	0	30,5637	0	0,2015	30,56	30,77
146	32	28,77	0,1890	Gagal	0	0	28,7728	0	0,1890	28,77	28,96
147	32	35,09	0,2333	Sukses	1	35,0909	0	0,1960	0	32,00	32,20
148	32	25,47	0,1661	Gagal	0	0	25,4737	0	0,1661	25,47	25,64
149	32	34,48	0,2290	Sukses	1	34,4829	0	0,1960	0	32,00	32,20

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Temi (hari)	Topri (hari)	Tjami (hari)
150	32	32,87	0,2177	Sukses	1	32,8702	0	0,1960	0	32,00	32,20

## Lampiran 28 Hasil Simulasi Komponen Hower

## Simulasi Monte Carlo Komponen Hower Dengan Skenario Interval Waktu Perawatan 25 Hari

i	tp (hari)	ti (hari)	Tcmi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
1	25	21,91	0,3485	Gagal	0	0	21,91	0	0,3485	21,91	22,26
2	25	22,95	0,3676	Gagal	0	0	22,95	0	0,3676	22,95	23,32
3	25	22,14	0,3527	Gagal	0	0	22,14	0	0,3527	22,14	22,49
4	25	20,81	0,3283	Gagal	0	0	20,81	0	0,3283	20,81	21,14
5	25	22,84	0,3654	Gagal	0	0	22,84	0	0,3654	22,84	23,21
6	25	26,32	0,4302	Sukses	1	26,32	0	0,4346	0	25,00	25,43
7	25	28,50	0,4714	Sukses	1	28,5	0	0,4346	0	25,00	25,43
8	25	27,30	0,4486	Sukses	1	27,3	0	0,4346	0	25,00	25,43
9	25	21,02	0,3323	Gagal	0	0	21,02	0	0,3323	21,02	21,35
10	25	30,36	0,5069	Sukses	1	30,36	0	0,4346	0	25,00	25,43
11	25	28,86	0,4782	Sukses	1	28,86	0	0,4346	0	25,00	25,43
12	25	31,68	0,5322	Sukses	1	31,68	0	0,4346	0	25,00	25,43
13	25	29,15	0,4836	Sukses	1	29,15	0	0,4346	0	25,00	25,43
14	25	30,59	0,5113	Sukses	1	30,59	0	0,4346	0	25,00	25,43
15	25	23,31	0,3741	Gagal	0	0	23,31	0	0,3741	23,31	23,68
16	25	24,02	0,3872	Gagal	0	0	24,02	0	0,3872	24,02	24,41

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
17	25	28,38	0,4691	Sukses	1	28,38	0	0,4346	0	25,00	25,43
18	25	30,70	0,5134	Sukses	1	30,7	0	0,4346	0	25,00	25,43
19	25	23,54	0,3784	Gagal	0	0	23,54	0	0,3784	23,54	23,92
20	25	30,48	0,5091	Sukses	1	30,48	0	0,4346	0	25,00	25,43
21	25	28,50	0,4714	Sukses	1	28,5	0	0,4346	0	25,00	25,43
22	25	22,60	0,3611	Gagal	0	0	22,6	0	0,3611	22,60	22,96
23	25	28,86	0,4782	Sukses	1	28,86	0	0,4346	0	25,00	25,43
24	25	25,72	0,4188	Sukses	1	25,72	0	0,4346	0	25,00	25,43
25	25	24,02	0,3872	Gagal	0	0	24,02	0	0,3872	24,02	24,41
26	25	25,23	0,4097	Sukses	1	25,23	0	0,4346	0	25,00	25,43
27	25	30,70	0,5134	Sukses	1	30,7	0	0,4346	0	25,00	25,43
28	25	31,25	0,5240	Sukses	1	31,25	0	0,4346	0	25,00	25,43
29	25	24,26	0,3917	Gagal	0	0	24,26	0	0,3917	24,26	24,65
30	25	30,36	0,5069	Sukses	1	30,36	0	0,4346	0	25,00	25,43
31	25	21,47	0,3404	Gagal	0	0	21,47	0	0,3404	21,47	21,81
32	25	24,26	0,3917	Gagal	0	0	24,26	0	0,3917	24,26	24,65
33	25	24,38	0,3939	Gagal	0	0	24,38	0	0,3939	24,38	24,77
34	25	31,25	0,5240	Sukses	1	31,25	0	0,4346	0	25,00	25,43
35	25	23,42	0,3762	Gagal	0	0	23,42	0	0,3762	23,42	23,80

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
36	25	26,69	0,4371	Sukses	1	26,69	0	0,4346	0	25,00	25,43
37	25	31,14	0,5219	Sukses	1	31,14	0	0,4346	0	25,00	25,43
38	25	24,26	0,3917	Gagal	0	0	24,26	0	0,3917	24,26	24,65
39	25	26,69	0,4371	Sukses	1	26,69	0	0,4346	0	25,00	25,43
40	25	28,50	0,4714	Sukses	1	28,5	0	0,4346	0	25,00	25,43
41	25	21,69	0,3444	Gagal	0	0	21,69	0	0,3444	21,69	22,03
42	25	28,86	0,4782	Sukses	1	28,86	0	0,4346	0	25,00	25,43
43	25	29,56	0,4916	Sukses	1	29,56	0	0,4346	0	25,00	25,43
44	25	20,70	0,3264	Gagal	0	0	20,7	0	0,3264	20,70	21,03
45	25	31,99	0,5383	Sukses	1	31,99	0	0,4346	0	25,00	25,43
46	25	20,70	0,3264	Gagal	0	0	20,7	0	0,3264	20,70	21,03
47	25	22,49	0,3590	Gagal	0	0	22,49	0	0,3590	22,49	22,85
48	25	31,03	0,5198	Sukses	1	31,03	0	0,4346	0	25,00	25,43
49	25	30,14	0,5026	Sukses	1	30,14	0	0,4346	0	25,00	25,43
50	25	20,91	0,3303	Gagal	0	0	20,91	0	0,3303	20,91	21,24
51	25	23,78	0,3828	Gagal	0	0	23,7814	0	0,3828	23,78	24,16
52	25	28,86	0,4782	Sukses	1	28,8626	0	0,4346	0	25,00	25,43
53	25	24,26	0,3917	Gagal	0	0	24,2606	0	0,3917	24,26	24,65
54	25	31,89	0,5363	Sukses	1	31,8903	0	0,4346	0	25,00	25,43

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
55	25	32,10	0,5403	Sukses	1	32,0989	0	0,4346	0	25,00	25,43
56	25	32,20	0,5423	Sukses	1	32,2037	0	0,4346	0	25,00	25,43
57	25	29,21	0,4849	Sukses	1	29,2147	0	0,4346	0	25,00	25,43
58	25	31,68	0,5322	Sukses	1	31,6789	0	0,4346	0	25,00	25,43
59	25	24,99	0,4052	Gagal	0	0	24,9862	0	0,4052	24,99	25,39
60	25	23,72	0,3817	Gagal	0	0	23,7225	0	0,3817	23,72	24,10
61	25	24,38	0,3939	Gagal	0	0	24,3811	0	0,3939	24,38	24,78
62	25	23,07	0,3697	Gagal	0	0	23,0697	0	0,3697	23,07	23,44
63	25	24,26	0,3917	Gagal	0	0	24,2606	0	0,3917	24,26	24,65
64	25	20,91	0,3303	Gagal	0	0	20,9148	0	0,3303	20,91	21,25
65	25	28,98	0,4804	Sukses	1	28,9795	0	0,4346	0	25,00	25,43
66	25	21,69	0,3444	Gagal	0	0	21,6897	0	0,3444	21,69	22,03
67	25	28,50	0,4714	Sukses	1	28,5035	0	0,4346	0	25,00	25,43
68	25	26,94	0,4417	Sukses	1	26,9352	0	0,4346	0	25,00	25,43
69	25	30,59	0,5113	Sukses	1	30,591	0	0,4346	0	25,00	25,43
70	25	21,24	0,3363	Gagal	0	0	21,2447	0	0,3363	21,24	21,58
71	25	30,59	0,5113	Sukses	1	30,591	0	0,4346	0	25,00	25,43
72	25	30,48	0,5091	Sukses	1	30,4795	0	0,4346	0	25,00	25,43
73	25	28,27	0,4669	Sukses	1	28,2666	0	0,4346	0	25,00	25,43

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
74	25	31,89	0,5363	Sukses	1	31,8903	0	0,4346	0	25,00	25,43
75	25	28,98	0,4804	Sukses	1	28,9795	0	0,4346	0	25,00	25,43
76	25	29,80	0,4960	Sukses	1	29,7957	0	0,4346	0	25,00	25,43
77	25	25,47	0,4142	Sukses	1	25,4698	0	0,4346	0	25,00	25,43
78	25	26,08	0,4257	Sukses	1	26,0815	0	0,4346	0	25,00	25,43
79	25	31,58	0,5302	Sukses	1	31,5758	0	0,4346	0	25,00	25,43
80	25	21,47	0,3404	Gagal	0	0	21,4675	0	0,3404	21,47	21,81
81	25	27,54	0,4532	Sukses	1	27,5426	0	0,4346	0	25,00	25,43
82	25	22,49	0,3590	Gagal	0	0	22,4875	0	0,3590	22,49	22,85
83	25	29,80	0,4960	Sukses	1	29,7957	0	0,4346	0	25,00	25,43
84	25	20,91	0,3303	Gagal	0	0	20,9148	0	0,3303	20,91	21,25
85	25	31,99	0,5383	Sukses	1	31,9944	0	0,4346	0	25,00	25,43
86	25	21,36	0,3383	Gagal	0	0	21,3558	0	0,3383	21,36	21,69
87	25	21,24	0,3363	Gagal	0	0	21,2447	0	0,3363	21,24	21,58
88	25	28,98	0,4804	Sukses	1	28,9795	0	0,4346	0	25,00	25,43
89	25	30,03	0,5004	Sukses	1	30,0258	0	0,4346	0	25,00	25,43
90	25	24,02	0,3872	Gagal	0	0	24,0182	0	0,3872	24,02	24,41
91	25	22,84	0,3654	Gagal	0	0	22,8362	0	0,3654	22,84	23,20
92	25	22,84	0,3654	Gagal	0	0	22,8362	0	0,3654	22,84	23,20



i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
93	25	30,25	0,5048	Sukses	1	30,2538	0	0,4346	0	25,00	25,43
94	25	21,24	0,3363	Gagal	0	0	21,2447	0	0,3363	21,24	21,58
95	25	22,37	0,3569	Gagal	0	0	22,3734	0	0,3569	22,37	22,73
96	25	30,36	0,5069	Sukses	1	30,3644	0	0,4346	0	25,00	25,43
97	25	29,45	0,4894	Sukses	1	29,448	0	0,4346	0	25,00	25,43
98	25	31,58	0,5302	Sukses	1	31,5758	0	0,4346	0	25,00	25,43
99	25	24,86	0,4029	Gagal	0	0	24,8627	0	0,4029	24,86	25,27
100	25	31,25	0,5240	Sukses	1	31,2522	0	0,4346	0	25,00	25,43
101	25	28,38	0,4691	Sukses	1	28,3848	0	0,4346	0	25,00	25,43
102	25	29,56	0,4916	Sukses	1	29,5635	0	0,4346	0	25,00	25,43
103	25	28,02	0,4623	Sukses	1	28,0244	0	0,4346	0	25,00	25,43
104	25	24,29	0,3922	Gagal	0	0	24,2859	0	0,3922	24,29	24,68
105	25	24,14	0,3895	Gagal	0	0	24,1407	0	0,3895	24,14	24,53
106	25	23,42	0,3762	Gagal	0	0	23,4243	0	0,3762	23,42	23,80
107	25	27,54	0,4532	Sukses	1	27,5426	0	0,4346	0	25,00	25,43
108	25	24,62	0,3984	Gagal	0	0	24,6207	0	0,3984	24,62	25,02
109	25	29,10	0,4827	Sukses	1	29,0969	0	0,4346	0	25,00	25,43
110	25	26,81	0,4394	Sukses	1	26,8125	0	0,4346	0	25,00	25,43
111	25	25,47	0,4142	Sukses	1	25,4698	0	0,4346	0	25,00	25,43

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
112	25	25,72	0,4188	Sukses	1	25,7167	0	0,4346	0	25,00	25,43
113	25	26,69	0,4371	Sukses	1	26,6905	0	0,4346	0	25,00	25,43
114	25	28,74	0,4759	Sukses	1	28,7424	0	0,4346	0	25,00	25,43
115	25	25,11	0,4075	Sukses	1	25,107	0	0,4346	0	25,00	25,43
116	25	25,11	0,4075	Sukses	1	25,107	0	0,4346	0	25,00	25,43
117	25	31,89	0,5363	Sukses	1	31,8903	0	0,4346	0	25,00	25,43
118	25	23,90	0,3850	Gagal	0	0	23,8995	0	0,3850	23,90	24,28
119	25	25,59	0,4165	Sukses	1	25,593	0	0,4346	0	25,00	25,43
120	25	31,89	0,5363	Sukses	1	31,8903	0	0,4346	0	25,00	25,43
121	25	27,06	0,4440	Sukses	1	27,0584	0	0,4346	0	25,00	25,43
122	25	31,28	0,5246	Sukses	1	31,2848	0	0,4346	0	25,00	25,43
123	25	25,47	0,4142	Sukses	1	25,4698	0	0,4346	0	25,00	25,43
124	25	25,35	0,4120	Sukses	1	25,3505	0	0,4346	0	25,00	25,43
125	25	22,49	0,3590	Gagal	0	0	22,4875	0	0,3590	22,49	22,85
126	25	25,35	0,4120	Sukses	1	25,3505	0	0,4346	0	25,00	25,43
127	25	25,84	0,4211	Sukses	1	25,8377	0	0,4346	0	25,00	25,43
128	25	21,13	0,3343	Gagal	0	0	21,1341	0	0,3343	21,13	21,47
129	25	22,72	0,3633	Gagal	0	0	22,7204	0	0,3633	22,72	23,08
130	25	22,60	0,3611	Gagal	0	0	22,6022	0	0,3611	22,60	22,96

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
131	25	26,32	0,4302	Sukses	1	26,3241	0	0,4346	0	25,00	25,43
132	25	30,14	0,5026	Sukses	1	30,1396	0	0,4346	0	25,00	25,43
133	25	20,91	0,3303	Gagal	0	0	20,9148	0	0,3303	20,91	21,25
134	25	28,50	0,4714	Sukses	1	28,5035	0	0,4346	0	25,00	25,43
135	25	20,70	0,3264	Gagal	0	0	20,7005	0	0,3264	20,70	21,03
136	25	27,42	0,4509	Sukses	1	27,4207	0	0,4346	0	25,00	25,43
137	25	30,59	0,5113	Sukses	1	30,591	0	0,4346	0	25,00	25,43
138	25	25,96	0,4234	Sukses	1	25,9593	0	0,4346	0	25,00	25,43
139	25	22,14	0,3527	Gagal	0	0	22,1441	0	0,3527	22,14	22,50
140	25	29,10	0,4827	Sukses	1	29,0969	0	0,4346	0	25,00	25,43
141	25	23,54	0,3784	Gagal	0	0	23,5438	0	0,3784	23,54	23,92
142	25	30,25	0,5048	Sukses	1	30,2538	0	0,4346	0	25,00	FALSE
143	25	21,47	0,3404	Gagal	0	0	21,4675	0	0,3404	21,47	21,81
144	25	28,15	0,4646	Sukses	1	28,1453	0	0,4346	0	25,00	25,43
145	25	27,30	0,4486	Sukses	1	27,2994	0	0,4346	0	25,00	25,43
146	25	25,47	0,4142	Sukses	1	25,4698	0	0,4346	0	25,00	25,43
147	25	31,99	0,5383	Sukses	1	31,9944	0	0,4346	0	25,00	25,43
148	25	22,14	0,3527	Gagal	0	0	22,1441	0	0,3527	22,14	22,50
149	25	31,36	0,5260	Sukses	1	31,3583	0	0,4346	0	25,00	25,43

i	tp (hari)	ti (hari)	Temi (hari)	Indikator	Poin	Tpi (hari)	Tfi (hari)	Tpmi (hari)	Tcmi (hari)	Topri (hari)	Tjami (hari)
150	25	29,68	0,4938	Sukses	1	29,6793	0	0,4346	0	25,00	25,43

## Lampiran 29 Surat Izin Perusahaan



**Factory** : Sidokerto RT.002, Pulorejo, Dawarblandong Kabupaten Mojokerto – Jawa Timur  
**Marketing Office** : J. Kupang Indah VI No 22 Dukuh Pakis – Surabaya  
**Website** : [www.wijayaprawiraperkasa.com](http://www.wijayaprawiraperkasa.com)  
**Phone** : + 6231- 9901375 – 78



Nomor : 003/SK/WPP1/II/2023

Perihal : Konfirmasi Penelitian

Kepada Yth :

Dekan Fakultas Teknik

Universitas 17 Agustus 1945 Surabaya

Di Tempat.

Dengan Hormat,

Berdasarkan surat pengantar penelitian dari Dekan Fakultas Teknik pada tanggal 09 Februari, perihal permohonan penelitian yang diajukan pada PT Wijaya Prawira Perkasa, Atas nama :

No	Nama	NBI
1	Dhoan Prasetyo W.C	1411900155
2	Moch. Faries Firmansyah	1411900115

Bersama ini kami sampaikan bahwa mahasiswa tersebut dapat melakukan penelitian di perusahaan kami.

Demikian surat balasan dari kami, atas perhatian dan kerjasamanya kami ucapkan terima kasih.

PT Wijaya Prawira Perkasa

**Retno Wulansari, S.Psi**  
Asst. Manager HRD

Lampiran 30 Lembar Revisi

**UNIVERSITAS 17 AGUSTUS 1945 SURABAYA**  
**FAKULTAS TEKNIK**  
**PROGRAM STUDI TEKNIK INDUSTRI**

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**REVISI SIDANG TUGAS AKHIR**


N A M A : Moch Faries Firmasyah  
 N B I : 1411900115  
 J U D U L : PENJADWALAN PREVENTIVE MAINTENANCE MESIN MILLING PIPE DENGAN MENGGUNAKAN PENDEKATAN SIMULASI MONTE CARLO (STUDI KASUS PT WIJAYA PRAWIRA PERKASA)

**BATAS BIMBINGAN REVISI** : 1 Minggu setelah Sidang

NO	URAIAN	BAB	HALAMAN	NO	URAIAN	BAB	HALAMAN
1.	penentuan 15 mesin dari 25 mesin milling yg ada?	} 1	1		- Uji t tidak usah digunakan (karena belum) - gunakan nilai P Value untuk normal - menentukan distribusi yang terapan - gunakan plot distribusi, bukan probability plot.	} 4/16	16
2.	Tambahkan biaya total perawatan, dibandingkan dng biaya preventive perawatan.						

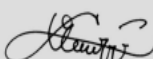
Telah Direvisi,  
Dosen Penguji 1,

14/6/2023



Dr. Ir. Zainal Arif, MT


Dosen Penguji 2,



Dr. Ir. I Nyoman Lokajaya, ST., MM


Surabaya, 08 Juni 2023

Mengetahui  
Dosen Pembimbing,




Wiwin Widiasih, ST., MT

## Lampiran 31 Kartu Bimbingan



**JURNAL BIMBINGAN TUGAS AKHIR**  
**PRODI TEKNIK INDUSTRI**  
**SEMESTER GASAL 2022/2023**

Nama : MOCH. FARIES FIRMAN SYAH  
 NBI : 191190015  
 Judul Penelitian : OPTIMASI SCHEDULE PREVENTIVE MAINTENANCE DENGAN MENGGUNAKAN PENDEKATAN SIMULASI MONTE CARLO (STUDI KASUS: PT WIJAYA PERAWIRA PERKASA)  
 Dosen Pembimbing: WIWIN WIDIASIH, ST., MT.



No.	Tanggal	Materi Bimbingan	Catatan Pembimbing	Paraf Pembimbing
1	2/2/2023	Topik TA	- data ditambah	<del>Wiwin Widiasih</del>
2	8/2/2023	Bab 1	narasi dr grafik	<del>Wiwin Widiasih</del>
3	9/2/2023	Bab 2	penelitian terdahulu	<del>Wiwin Widiasih</del>
4	13/2/2023	Bab 2	narasi penelitian terdahulu	<del>Wiwin Widiasih</del>
5	15/2/2023	Bab 3	metode penelitian revisi	<del>Wiwin Widiasih</del>
6	16/2/2023	Bab 3	metode penelitian narasi	<del>Wiwin Widiasih</del>
7	5/4/2023	Bab 4	perubahan min kritis, pareto	<del>Wiwin Widiasih</del>
8	11/4/2023	Bab 4	perhitungan MBR, MTR	<del>Wiwin Widiasih</del>
9	10/5/2023	Bab 4	fit in distribusi	<del>Wiwin Widiasih</del>
10	11/5/2023	Bab 4	perhitungan MTR minitab	<del>Wiwin Widiasih</del>
11	11/5/2023	Bab 4	hitung reliability, availability	<del>Wiwin Widiasih</del>
12	20/5/2023	Bab 4	membuktikan bil. random	<del>Wiwin Widiasih</del>
13	23/5/2023	Bab 4	transformasi data bilangan acak	<del>Wiwin Widiasih</del>
14	25/5/2023	Bab 4	uji validitas	<del>Wiwin Widiasih</del>
15	23/5/2023	Bab 4	hitung valid, trial	<del>Wiwin Widiasih</del>
16	30/5/2023	Bab 5	uraian simulasi	<del>Wiwin Widiasih</del>
			simpulan dan saran	<del>Wiwin Widiasih</del>

## Lampiran 32 Biografi Penulis



Penulis bernama Moch. Faries Firmansyah lahir pada tanggal 04 April 2000 di kota Sidoarjo - Jawa Timur. Penulis ini anak ke dua dari dua bersaudara Bpk. Khodarin dan Ibu Siti Nurhayatin. Penulis memulai masa pendidikan dari jenjang sekolah di MI Darussalam Pejangkungan Pada Tahun 2006–2012. Kemudian melanjutkan ke jenjang sekolah menengah pertama SMP Negeri 1 Prambon Sidoarjo pada tahun 2012 –2015. Kemudian melanjutkan ke jenjang Sekolah Menengah Kejuruan SMK Negeri 3 Buduran Sidoarjo pada tahun 2015 – 2018. Pada tahun 2019 terdaftar sebagai mahasiswa di Universitas 17 Agustus 1945 Surabaya, Fakultas Teknik, Program Studi Industri dan pada tahun 2023 penulis dinyatakan lulus dan berhak menyandang gelar Sarjana Teknik Industri.

Dengan ketekunan dan motivasi tinggi untuk terus belajar dan berusaha, penulis telah berhasil menyelesaikan pengerjaan Tugas Akhir Pengendalian Kualitas Produk. Semoga dengan penulisan skripsi ini mampu memberikan kontribusi positif bagi dunia pendidikan.

Akhir kata penulis mengucapkan rasa bersyukur yang sebesar – besarnya kepada Allah SWT dan rasa terimakasih kepada semua pihak yang telah membantu demi terselesaikan skripsi ini yang berjudul “Penjadwalan Preventive Maintenance Dengan Menggunakan Pendekatan Simulasi Monte Carlo (Studi Kasus PT Wijaya Prawira Perkasa)”. Penulis dapat dihubungi melalui email : [mochfariesfir@gmail.com](mailto:mochfariesfir@gmail.com) .