

Lampiran B

Data waktu antar kerusakan komponen pada Mesin I

Tanggal Kerusakan	Komponen	Keterangan
15-Jan-02	Oil Seal	Ganti
31-Jan-02	Relay	Ganti
28-Feb-02	Contactora Fuse	Ganti
8-Mar-02	Timer	Ganti
18-Mar-02	Oil Seal	Ganti
11-Apr-02	Gulungan Motor	Repair
26-Apr-02	Contactora Fuse	Ganti
6-May-02	Relay	Ganti
30-May-02	Oil Seal	Ganti
5-Jun-02	Timer	Ganti
6-Jun-02	Conductiviti & Capacitiv Sensor	Ganti
10-Jun-02	V Belt & Puly	Ganti
9-Jul-02	Contactora Fuse	Ganti
11-Jul-02	Oil Seal	Ganti
22-Jul-02	Relay	Ganti
3-Sep-02	Timer	Ganti
6-Sep-02	Relay	Ganti
24-Sep-02	Clutch & Brake	Repair
10-Oct-02	Contactora Fuse	Ganti
14-Oct-02	Oil Seal	Ganti
22-Oct-03	Bearing	Ganti
24-Oct-03	Relay	Ganti
12-Nov-02	Timer	Ganti
18-Dec-02	Oil Seal	Ganti
6-Jan-03	Contactora Fuse	Ganti
16-Jan-03	Relay	Ganti
5-Feb-03	Oil Seal	Ganti
21-Mar-03	Timer	Ganti
28-Mar-03	Relay	Ganti
8-Apr-03	Contactora Fuse	Ganti
28-Apr-03	Oil Seal	Ganti
3-Jun-03	Oil Seal	Ganti
24-Jul-03	Relay	Ganti
14-Aug-03	Oil Seal	Ganti
1-Sep-03	Contactora Fuse	Ganti
16-Sep-03	Timer	Ganti
2-Oct-03	Oil Seal	Ganti
19-Oct-03	Conductiviti & Capacitiv Sensor	Ganti
4-Nov-03	Disc Brake	Ganti
12-Nov-03	Gulungan Motor	Repair
27-Nov-03	Timer	Ganti
2-Dec-03	Gulungan Brake	Repair
10-Dec-03	Chain & Sprocket	Ganti

15-Dec-03	Relay	Ganti
17-Dec-03	Contactactor Fuse	Ganti
18-Dec-03	Oil Seal	Ganti
20-Dec-03	Timer	Ganti
3-Jan-04	Relay	Ganti
16-Jan-04	Contactactor Fuse	Ganti
5-Feb-04	Oil Seal	Ganti
18-Feb-03	Timer	Ganti
4-Mar-04	Relay	Ganti
30-Mar-04	Contactactor Fuse	Ganti
28-Apr-04	Oil Seal	Ganti
7-May-04	Timer	Ganti
17-May-04	Relay	Ganti
4-Jun-04	Gulungan Motor	Repair
15-Jun-04	Contactactor Fuse	Ganti
1-Jul-04	Oil Seal	Ganti
5-Jul-04	Solenoid Tracker	Ganti
21-Jul-04	Timer	Ganti
29-Jul-04	Relay	Ganti
2-Aug-04	Contactactor Fuse	Ganti
22-Sep-04	Oil Seal	Ganti
6-Oct-04	Relay	Ganti
2-Nov-04	Contactactor Fuse	Ganti
22-Dec-04	Conductiviti & Capacitiv Sensor	Ganti

Data waktu antar kerusakan komponen pada Mesin 2

Tanggal Kerusakan	Komponen	Keterangan
24-Jan-02	Oil Seal	Ganti
8-Feb-02	Relay	Ganti
11-Feb-02	Timer	Ganti
27-Mar-02	Contactactor Fuse	Ganti
9-Apr-02	Gulungan Motor	Repair
10-May-02	Oil Seal	Ganti
24-Jun-02	Timer	Ganti
26-Jun-02	Relay	Ganti
5-Aug-02	Contactactor Fuse	Ganti
9-Aug-02	Oil Seal	Ganti
11-Sep-02	Timer	Ganti
20-Sep-02	Oil Seal	Ganti
28-Oct-02	Relay	Ganti
14-Nov-02	Contactactor Fuse	Ganti
19-Nov-02	Conductiviti & Capacitiv Sensor	Ganti
4-Dec-02	Timer	Ganti
13-Dec-02	Relay	Ganti
17-Dec-02	Oil Seal	Ganti
18-Dec-02	V.Belt & Pulley	Ganti

20-Dec-02	Contacto Fuse	Ganti
21-Dec-02	Solenoid Tracker	Ganti
3-Jan-03	Clutch & Brake	Repair
16-Jan-03	Gulungan Motor	Repair
6-Feb-03	Oil Seal	Ganti
17-Feb-03	Relay	Ganti
28-Feb-03	Timer	Ganti
4-Mar-03	Contacto Fuse	Ganti
17-Mar-03	Beating	Ganti
19-Mar-03	Disc Brake	Ganti
27-Mar-03	Gulungan Brake	Repair
9-Apr-03	Relay	Ganti
26-May-03	Contacto Fuse	Ganti
1-Jul-03	Relay	Ganti
30-Jul-03	Oil Seal	Ganti
1-Aug-03	Timer	Ganti
26-Aug-03	Contacto Fuse	Ganti
27-Aug-03	Oil Seal	Ganti
3-Sep-03	Relay	Ganti
8-Nov-03	Timer	Ganti
13-Dec-03	Relay	Ganti
9-Jan-04	Contacto Fuse	Ganti
16-Jan-04	Oil Seal	Ganti
3-Feb-04	Relay	Ganti
17-Feb-04	Timer	Ganti
2-Mar-04	Contacto Fuse	Ganti
17-Mar-04	Chain & Sprocket	Ganti
6-Apr-04	Relay	Ganti
30-Apr-04	Timer	Ganti
4-May-04	Oil Seal	Ganti
1-Jun-04	Relay	Ganti
21-Jun-04	Timer	Ganti
7-Jul-04	Contacto Fuse	Ganti
3-Aug-04	Timer	Ganti
4-Aug-04	Relay	Ganti
1-Sep-04	Oil Seal	Ganti
25-Oct-04	Contacto Fuse	Ganti
1-Nov-04	Relay	Ganti
22-Nov-04	Gulungan Motor	Repair
6-Dec-04	Oil Seal	Ganti

Data waktu antar kerusakan komponen pada Mesin 3

Tanggal Kerusakan	Komponen	Keterangan
10-Jan-02	Oil Seal	Ganti
18-Jan-02	Relay	Ganti
5-Feb-02	Timer	Ganti
18-Mar-02	Contacto Fuse	Ganti
26-Mar-02	Oil Seal	Ganti

30-Apr-02	Relay	Ganti
1-May-02	Timer	Ganti
13-May-02	Gulungan Motor	Repair
30-May-02	Contacto Fuse	Ganti
4-Jun-02	Oil Seal	Ganti
25 Jun 02	Conductiviti & Capacitiv Sensor	Ganti
3-Jul-02	Relay	Ganti
9-Jul-02	Contacto Fuse	Ganti
15-Aug-02	Oil Seal	Ganti
16-Aug-02	Relay	Ganti
2-Sep-02	Contacto Fuse	Ganti
3-Sep-02	V.Belt & Puly	Ganti
1-Oct-02	Oil Seal	Ganti
8-Oct-02	Timer	Ganti
5-Nov-02	Relay	Ganti
6 Jan-03	Oil Seal	Ganti
4-Feb-03	Relay	Ganti
17-Feb-03	Timer	Ganti
18-Feb-03	Contacto Fuse	Ganti
21-Feb-03	Gulungan Motor	Repair
3-Mar-03	Oil Seal	Ganti
10-Mar-03	Clutch & Brake	Repair
18-Mar-03	Bearing	Ganti
21-Mar-03	Contacto Fuse	Ganti
8-Apr-03	Disc Brake	Ganti
18-Apr-03	Gulungan Brake	Repair
21-Apr-03	Timer	Ganti
15-May-03	Relay	Ganti
17-May-03	Oil Seal	Ganti
2-Jun-03	Contacto Fuse	Ganti
9-Jun-03	Timer	Ganti
16-Jun-03	Oil Seal	Ganti
18-Jul-03	Relay	Ganti
29-Aug-03	Oil Seal	Ganti
10-Sep-03	Relay	Ganti
7 Jan 04	Relay	Ganti
28-Jan-04	Oil Seal	Ganti
13-Feb-04	Timer	Ganti
12-Mar-04	Contacto Fuse	Ganti
19-Mar-04	Oil Seal	Ganti
3-May-04	Relay	Ganti
16-Jun-04	Timer	Ganti
30-Jun-04	Oil Seal	Ganti
8-Jul-04	Contacto Fuse	Ganti
21-Jul-04	Chain & Sprocket	Ganti
9-Aug-04	Gulungan Motor	Ganti
19-Aug-04	Timer	Repair
3-Sep-04	Contacto Fuse	Ganti

22-Sep-04	Relay	Ganti
27-Sep-04	Oil Seal	Ganti
4-Oct-04	Timer	Ganti
1-Nov-04	Contactor Fuse	Ganti
2-Nov-04	Relay	Ganti
3-Nov-04	Solenoid Tracker	Ganti
25-Nov-04	Timer	Ganti

Data waktu antar kerusakan komponen pada Mesin 4

Tanggal Kerusakan	Komponen	Keterangan
7-Jan-02	Relay	Ganti
30-Jan-02	Contactor Fuse	Ganti
4-Feb-02	Timer	Ganti
28-Feb-02	Gulungan Motor	Repair
4-Mar-02	Relay	Ganti
1-Apr-02	Contactor Fuse	Ganti
8-Apr-02	Oil Seal	Ganti
12-Apr-02	V.Belt	Ganti
29-Apr-02	Relay	Ganti
3-Jun-02	Oil Seal	Ganti
13-Jun-02	Contactor Fuse	Ganti
20-Jun-02	Timer	Ganti
2-Jul-02	Conductiviti & Capacitiv Sensor	Ganti
30-Jul-02	Clutch & Brake	Repair
1-Aug-02	Relay	Ganti
14-Aug-02	Oil Seal	Ganti
30-Aug-02	Contactor Fuse	Ganti
2-Oct-02	Timer	Ganti
30-Oct-02	Oil Seal	Ganti
17-Nov-02	Relay	Ganti
10-Jan-03	Relay	Ganti
20-Jan-03	Oil Seal	Ganti
27-Jan-03	Contactor Fuse	Ganti
12-Mar-03	Timer	Ganti
25-Mar-03	Oil Seal	Ganti
31-Mar-03	Relay	Ganti
8-Apr-03	Gulungan Motor	Repair
17-Apr-03	Contactor Fuse	Ganti
2-May-03	Oil Seal	Ganti
13-May-03	Relay	Ganti
20-May-03	Timer	Ganti
27-May-03	Bearing	Ganti
4-Jun-03	Disc Brake	Ganti
10-Jun-03	Timer	Ganti
3-Jul-03	Relay	Ganti
17-Jul-03	Oil Seal	Ganti
11-Aug-03	Relay	Ganti

15 Oct 03	Contacto Fuse	Ganti
23 Oct 03	Timer	Ganti
5 Jan 04	Relay	Ganti
19-Jan-04	Oil Seal	Ganti
24-Feb-04	Contacto Fuse	Ganti
19-Mar 04	Relay	Ganti
15-Apr-04	Timer	Ganti
22 Apr 04	Gulungan Motor	Repair
3 May-04	Relay	Ganti
8 Jun-04	Contacto Fuse	Ganti
16 Jun 04	Oil Seal	Ganti
21-Jul-04	Timer	Ganti
29-Jul-04	Gulungan Brake	Repair
4-Aug-04	Chain & Sprocket	Ganti
19-Aug-04	Oil Seal	Ganti
31-Aug-04	Relay	Ganti
3-Sep-04	Solenoid Tracker	Ganti
20-Sep-04	Timer	Ganti
12-Oct-04	Contacto Fuse	Ganti
29-Dec-04	Contacto Fuse	Ganti
30-Dec 04	Timer	Ganti

Lampiran C

Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 1

Auto::Fit Distributions

distribution	rank	acceptance
Lognormal(0, 4.14, 0.276)	95.2	accept
Weibull(0, 4.49, 71.9)	88.2	accept
Pearson 5(0, 12.9, 780)	86.5	accept
Beta(0, 95, 5.37, 2.69)	75.6	accept
Triangular(0, 102, 81.3)	45.2	accept
Uniform(0, 95)	0.0423	reject

Uji Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 1

goodness of fit

data points	15
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 95, 5.37, 2.69)	1.6 (2)	0.169
Lognormal(0, 4.14, 0.276)	1.6 (2)	0.154
Pearson 5(0, 12.9, 780)	1.6 (2)	0.161
Triangular(0, 102, 81.3)	not available	0.157
Uniform(0, 95)	8.4 (2)	0.382
Weibull(0, 4.49, 71.9)	not available	0.169

Lognormal

minimum = 0 [fixed]
mu = 4.14442
sigma = 0.275502

Chi Squared

total classes 4
interval type equal probable
net bins 3
chi**2 1.6
degrees of freedom 2
alpha 0.05
chi**2(2,0.05) 5.99
p-value 0.449
result DO NOT REJECT

Kolmogorov-Smirnov

data points 15
ks stat 0.154
alpha 0.05
ks stat(15,0.05) 0.338
p-value 0.819
result DO NOT REJECT

Distribusi waktu antar kerusakan komponen Relay pada Mesin 1

Auto::Fit Distributions

distribution	rank	acceptance
Weibull(0, 2.63, 84.7)	96.2	99.99
Log-Logistic(0, 4.09, 71.5)	94.7	99.99
Gamma(0, 5.3, 14.2)	85.5	
Erlang(0, 5, 15.1)	82.7	
Pearson 6(0, 252, 6.15, 21.5)	74.4	
Beta(0, 234, 3.69, 7.78)	67.5	
Lognormal(0, 4.22, 0.478)	64.5	
Inverse Gaussian(0, 285, 75.3)	50.1	
Pearson 5(0, 3.81, 227)	37.2	
Uniform(0, 144)	8.93	
Exponential(0, 75.3)	0.838	99.99
Triangular	no fit	no fit
Pareto	no fit	no fit

Uji Distribusi waktu antar kerusakan komponen Relay pada Mesin 1
goodness of fit

data points 13
estimates maximum likelihood estimates
accuracy of fit 0.0003
level of significance 0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 234, 3.69, 7.78)	not available	0.146
Erlang(0, 5, 15.1)	not available	0.176
Exponential(0, 75.3)	not available	0.38
Gamma(0, 5.3, 14.2)	not available	0.172
Inverse Gaussian(0, 285, 75.3)	not available	0.22
Log-Logistic(0, 4.09, 71.5)	not available	0.157
Lognormal(0, 4.22, 0.478)	not available	0.201
Pareto	no fit	no fit
Pearson 5(0, 3.81, 227)	not available	0.235
Pearson 6(0, 252, 6.15, 21.5)	not available	0.187
Triangular	no fit	no fit
Uniform(0, 144)	not available	0.243
Weibull(0, 2.63, 84.7)	not available	0.151

Weibull

minimum = 0 [fixed]
alpha = 2.62503
beta = 84.6606

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	13
ks stat	0.151
alpha	0.05
ks stat(13,0.05)	0.361
p-value	0.886
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 1

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic[0, 4.72, 78.9]	100	accept
Weibull[0, 3.07, 91]	97.6	accept
Gamma[0, 7.35, 11.1]	82.9	accept
Erlang[0, 7, 11.6]	80	accept
Pearson 6[0, 244, 9.36, 29]	73.5	accept
Beta[0, 251, 5.09, 10.6]	71.5	accept
Lognormal[0, 4.33, 0.392]	62.6	accept
Inverse Gaussian[0, 486, 81.4]	54.9	accept
Pearson 5[0, 6.02, 420]	41	accept
Triangular[0, 168, 56]	9.97	accept
Uniform[0, 146]	7.48	accept
Exponential[0, 81.4]	1.57	accept
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 1

goodness of fit

data points	12
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta[0, 251, 5.09, 10.6]	not available	0.176
Erlang[0, 7, 11.6]	not available	0.202
Exponential[0, 81.4]	not available	0.362
Gamma[0, 7.35, 11.1]	not available	0.198
Inverse Gaussian[0, 486, 81.4]	not available	0.234
Log-Logistic[0, 4.72, 78.9]	not available	0.175
Lognormal[0, 4.33, 0.392]	not available	0.224
Pareto	no fit	no fit
Pearson 5[0, 6.02, 420]	not available	0.253
Pearson 6[0, 244, 9.36, 29]	not available	0.21
Triangular[0, 168, 56]	not available	0.28
Uniform[0, 146]	not available	0.257
Weibull[0, 3.07, 91]	not available	0.177

Log-Logistic

minimum = 0 [fixed]

p = 4.72093

beta = 78.8915

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points 12

ks stat 0.175

alpha 0.05

ks stat(12,0.05) 0.375

p value 0.797

result DO NOT REJECT

Distribusi waktu antar kerusakan komponen Timer pada Mesin 1

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 3.88, 80.1)	100	
Gamma(0, 4.56, 19)	87	
Exlang(0, 5, 17.4)	86.6	
Pearson 6(0, 260, 5.77, 18.2)	84.9	
Lognormal(0, 4.35, 0.507)	73.1	
Weibull(0, 2.3, 98)	64.3	
Inverse Gaussian(0, 289, 86.8)	59.1	
Beta(0, 789, 4.11, 33.2)	49.4	
Pearson 5(0, 3.52, 235)	43.8	
Triangular(0, 210, 42)	18.6	
Uniform(0, 179)	9.38	
Exponential(0, 86.8)	2.74	
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Timer pada Mesin 1
goodness of fit

data points 10
estimates maximum likelihood estimates
accuracy of fit 0.0003
level of significance 0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta[0, 789, 4.11, 33.2]	not available	0.205
Erlang[0, 5, 17.4]	not available	0.199
Exponential[0, 86.8]	not available	0.399
Gamma[0, 4.56, 19]	not available	0.198
Inverse Gaussian[0, 289, 86.8]	not available	0.241
Log-Logistic[0, 3.88, 80.1]	not available	0.179
Lognormal[0, 4.35, 0.507]	not available	0.221
Pareto	no fit	no fit
Pearson 5[0, 3.52, 235]	not available	0.264
Pearson 6[0, 260, 5.77, 18.2]	not available	0.202
Triangular[0, 210, 42]	not available	0.263
Uniform[0, 179]	not available	0.292
Weibull[0, 2.3, 98]	not available	0.231

Log-Logistic

minimum = 0 [fixed]
p = 3.87627
beta = 80.1131

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	10
ks stat	0.179
alpha	0.05
ks stat[10,0.05]	0.409
p-value	0.852
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 2

Auto::Fit Distributions

distribution	rank	acceptance
Weibull(0, 2.5, 107)	93.2	accept
Triangular(0, 195, 88.6)	84.6	accept
Log-Logistic(0, 3.38, 89.5)	74.4	accept
Gamma(0, 4.4, 21.5)	63.3	accept
Erlang(0, 4, 23.7)	59.2	accept
Pearson 6(0, 285, 5.45, 17.3)	53.4	accept
Lognormal(0, 4.43, 0.522)	42.7	accept
Beta(0, 174, 2.85, 2.91)	42.5	accept
Inverse Gaussian(0, 306, 94.7)	33.5	accept
Uniform(0, 174)	26.2	accept
Pearson 5(0, 3.45, 249)	24.1	accept
Exponential(0, 94.7)	6.72	accept
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 2
goodness of fit

data points	11
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 174, 2.85, 2.91)	not available	0.248
Erlang(0, 4, 23.7)	not available	0.236
Exponential(0, 94.7)	not available	0.332
Gamma(0, 4.4, 21.5)	not available	0.23
Inverse Gaussian(0, 306, 94.7)	not available	0.278
Log-Logistic(0, 3.38, 89.5)	not available	0.213
Lognormal(0, 4.43, 0.522)	not available	0.261
Pareto	no fit	no fit
Pearson 5(0, 3.45, 249)	not available	0.295
Pearson 6(0, 285, 5.45, 17.3)	not available	0.245
Triangular(0, 195, 88.6)	not available	0.176
Uniform(0, 174)	not available	0.233
Weibull(0, 2.5, 107)	not available	0.187

Weibull

minimum = 0 [fixed]
 alpha = 2.49506
 beta = 106.878

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	11
ks stat	0.187
alpha	0.05
ks stat(11,0.05)	0.391
p-value	0.772
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Relay pada Mesin 2

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 5.1, 70.2)	99	
Pearson 5(0, 9.87, 678)	86.1	
Pearson 6(0, 11.8, 65.9, 11.1)	82.6	
Lognormal(0, 4.28, 0.333)	70.2	
Inverse Gaussian(0, 660, 76.7)	68.7	
Gamma(0, 8.72, 8.8)	55.4	
Erlang(0, 9, 8.52)	52.3	
Weibull(0, 2.91, 86.2)	49.6	
Beta(0, 138, 4.11, 3.67)	44.5	
Triangular(0, 158, 60.8)	29.3	
Uniform(0, 138)	2.04	
Exponential(0, 76.7)	0.165	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Relay pada Mesin 2

goodness of fit

data points	13
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 138, 4.11, 3.67)	not available	0.226
Erlang(0, 9, 8.52)	not available	0.243
Exponential(0, 76.7)	not available	0.451
Gamma(0, 8.72, 8.8)	not available	0.24
Inverse Gaussian(0, 660, 76.7)	not available	0.226
Log-Logistic(0, 5.1, 70.2)	not available	0.193
Lognormal(0, 4.28, 0.333)	not available	0.224
Pareto	no fit	no fit
Pearson 5(0, 9.87, 678)	not available	0.208
Pearson 6(0, 11.8, 65.9, 11.1)	not available	0.211
Triangular(0, 158, 60.8)	not available	0.22
Uniform(0, 138)	not available	0.333
Weibull(0, 2.91, 86.2)	not available	0.246

Log-Logistic

minimum	= 0 [fixed]
p	= 5.10342
beta	= 70.1658

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	13
ks stat	0.193
alpha	0.05
ks stat(13,0.05)	0.361
p-value	0.651
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Timer pada Mesin 2

AutoFit Distributions

distribution	rank	acceptance
Log-Logistic[0, 4.76, 85.8]	100	
Erlang[0, 8, 11.3]	99	
Gamma[0, 7.89, 11.5]	98.9	
Pearson 6[0, 209, 10.9, 26.2]	98.6	
Lognormal[0, 4.44, 0.366]	97.4	
Inverse Gaussian[0, 634, 90.4]	96.4	
Pearson 5[0, 7.46, 590]	91	
Weibull[0, 3.04, 101]	88.4	
Beta[0, 154, 4.34, 3.63]	73.7	
Triangular[0, 180, 71.9]	36.5	
Uniform[0, 154]	8.6	
Exponential[0, 90.4]	2.51	
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Timer pada Mesin 2

goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 154, 4.34, 3.63)	not available	0.182
Erlang(0, 8, 11.3)	not available	0.131
Exponential(0, 90.4)	not available	0.379
Gamma(0, 7.89, 11.5)	not available	0.132
Inverse Gaussian(0, 634, 90.4)	not available	0.147
Log-Logistic(0, 4.76, 85.8)	not available	0.117
Lognormal(0, 4.44, 0.366)	not available	0.142
Pareto	no fit	no fit
Pearson 5(0, 7.46, 590)	not available	0.165
Pearson 6(0, 209, 10.9, 26.2)	not available	0.134
Triangular(0, 180, 71.9)	not available	0.212
Uniform(0, 154)	not available	0.279
Weibull(0, 3.04, 101)	not available	0.171

Log-Logistic

minimum	= 0 [fixed]
p	= 4.76118
beta	= 85.7783

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	10
ks stat	0.117
alpha	0.05
ks stat(10,0.05)	0.409
p-value	0.996
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 2

Auto::Fit Distributions

distribution	rank	acceptance
Weibull(0, 3.45, 105)	98.4	accept
Lognormal(0, 4.47, 0.405)	96.6	accept
Triangular(0, 145, 130)	88.7	accept
Pearson 5(0, 5.59, 448)	80.9	accept
Beta(0, 136, 2.41, 1.22)	70.9	accept
Uniform(0, 136)	1.84	accept

Uji Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 2

goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 136, 2.41, 1.22)	not available	0.204
Lognormal(0, 4.47, 0.405)	not available	0.146
Pearson 5(0, 5.59, 448)	not available	0.177
Triangular(0, 145, 130)	not available	0.153
Uniform(0, 136)	not available	0.344
Weibull(0, 3.45, 105)	not available	0.153

Weibull

minimum	= 0 [fixed]
alpha	= 3.45195
beta	= 105.187

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	10
ks stat	0.153
alpha	0.05
ks stat(10,0.05)	0.409
p-value	0.947
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 3

Auto::Fit Distributions

distribution	rank	acceptance
Erlang[0, 7, 10.9]	99.5	accept
Gamma[0, 7.05, 10.8]	99.4	accept
Log-Logistic[0, 4.69, 71.8]	98.1	accept
Lognormal[0, 4.26, 0.388]	86.3	accept
Inverse Gaussian[0, 469, 76.2]	82.7	accept
Beta[0, 3.62e+05, 6.95, 3.29e+04]	75.3	accept
Pearson 6[0, 17.4, 33.8, 8.63]	75.3	accept
Weibull[0, 2.72, 85.7]	74.6	accept
Pearson 5[0, 6.57, 431]	66.5	accept
Uniform[0, 152]	6.11	accept
Exponential[0, 76.2]	0.712	reject
Triangular[0, 158, 146]	0.00802	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 3
goodness of fit

data points	13
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta[0, 3.62e+05, 6.95, 3.29e+04]	not available	0.16
Erlang[0, 7, 10.9]	not available	0.159
Exponential[0, 76.2]	not available	0.383
Gamma[0, 7.05, 10.8]	not available	0.159
Inverse Gaussian[0, 469, 76.2]	not available	0.184
Log-Logistic[0, 4.69, 71.8]	not available	0.162
Lognormal[0, 4.26, 0.388]	not available	0.179
Pareto	no fit	no fit
Pearson 5[0, 6.57, 431]	not available	0.206
Pearson 6[0, 17.4, 33.8, 8.63]	not available	0.194
Triangular[0, 158, 146]	not available	0.463
Uniform[0, 152]	not available	0.245
Weibull[0, 2.72, 85.7]	not available	0.191

Erlang

minimum = 0 [fixed]
 m = 7
 beta = 10.8901

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points 13
 ks stat 0.159
 alpha 0.05
 ks stat(13,0.05) 0.361
 p-value 0.848
 result DO NOT REJECT

Distribusi waktu antar kerusakan komponen Relay pada Mesin 3

Auto::Fit Distributions

distribution	rank	acceptance
Erlang(0, 7, 12.1)	99.1	
Gamma(0, 7.12, 11.9)	98.4	accept
Pearson 6(0, 225, 9.46, 26)	98.2	accept
Log-Logistic(0, 4.25, 80.5)	97.3	accept
Lognormal(0, 4.37, 0.389)	96.6	accept
Inverse Gaussian(0, 529, 84.9)	96	accept
Weibull(0, 3.05, 95.3)	90.7	accept
Pearson 5(0, 6.65, 487)	89.2	accept
Triangular(0, 158, 92.1)	83.7	accept
Beta(0, 142, 3.62, 2.81)	74.5	accept
Uniform(0, 142)	5.46	
Exponential(0, 84.9)	1.14	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Relay pada Mesin 3
goodness of fit

data points 12
estimates maximum likelihood estimates
accuracy of fit 0.0003
level of significance 0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 142, 3.62, 2.81)	not available	0.176
Erlang(0, 7, 12.1)	not available	0.138
Exponential(0, 84.9)	not available	0.383
Gamma(0, 7.12, 11.9)	not available	0.14
Inverse Gaussian(0, 529, 84.9)	not available	0.146
Log-Logistic(0, 4.25, 80.5)	not available	0.142
Lognormal(0, 4.37, 0.389)	not available	0.144
Pareto	no fit	no fit
Pearson 5(0, 6.65, 487)	not available	0.159
Pearson 6(0, 225, 9.46, 26)	not available	0.14
Triangular(0, 158, 92.1)	not available	0.135
Uniform(0, 142)	not available	0.289
Weibull(0, 3.05, 95.3)	not available	0.16

Erlang

minimum = 0 [fixed]
m = 7
beta = 12.131

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	12
ks stat	0.138
alpha	0.05
ks stat(12,0.05)	0.375
p-value	0.954
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Timer pada Mesin 3

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 3.04, 84)	99.8	accept
Pearson 5(0, 3.93, 301)	95	accept
Erlang(0, 3, 34.1)	90.1	accept
Weibull(0, 1.81, 116)	88.5	accept
Lognormal(0, 4.47, 0.545)	85.6	accept
Inverse Gaussian(0, 304, 102)	85	accept
Pearson 6(0, 142, 5.75, 9.01)	81.9	accept
Gamma(0, 3.33, 30.8)	77.2	accept
Beta(0, 249, 3.19, 5.96)	56.5	accept
Uniform(0, 249)	12.3	accept
Exponential(0, 102)	10.8	accept
Triangular	no fit	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Timer pada Mesin 3

goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 249, 3.19, 5.96)	not available	0.23
Erlang(0, 3, 34.1)	not available	0.21
Exponential(0, 102)	not available	0.362
Gamma(0, 3.33, 30.8)	not available	0.227
Inverse Gaussian(0, 304, 102)	not available	0.218
Log-Logistic(0, 3.04, 84)	not available	0.196
Lognormal(0, 4.47, 0.545)	not available	0.217
Pareto	no fit	no fit
Pearson 5(0, 3.93, 301)	not available	0.203
Pearson 6(0, 142, 5.75, 9.01)	not available	0.222
Triangular	no fit	no fit
Uniform(0, 249)	not available	0.27
Weibull(0, 1.81, 116)	not available	0.211

Log-Logistic

minimum = 0 [fixed]

p = 3.03705

beta = 84.0381

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points 10

ks stat 0.196

alpha 0.05

ks stat(10,0.05) 0.409

p-value 0.77

result DO NOT REJECT

Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 3

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 2.76, 71.9)	98.3	accept
Pearson 5(0, 3.05, 196)	97.8	accept
Pearson 6(0, 8.52, 25.6, 3.31)	97.5	accept
Beta(0, 284, 2.81, 7.65)	76	accept
Lognormal(0, 4.34, 0.636)	71.4	accept
Inverse Gaussian(0, 196, 95.9)	67.6	accept
Erlang(0, 2, 48)	56.9	accept
Weibull(0, 1.47, 107)	45.8	accept
Gamma(0, 2.37, 40.4)	42.8	accept
Exponential(0, 95.9)	38.7	accept
Triangular(0, 321, 32.1)	3.78	accept
Uniform(0, 284)	0.294	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 3

goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta[0, 284, 2.81, 7.65]	not available	0.188
Erlang[0, 2, 48]	not available	0.25
Exponential[0, 95.9]	not available	0.276
Gamma[0, 2.37, 40.4]	not available	0.271
Inverse Gaussian[0, 196, 95.9]	not available	0.236
Log-Logistic[0, 2.76, 71.9]	not available	0.189
Lognormal[0, 4.34, 0.636]	not available	0.23
Pareto	no fit	no fit
Pearson 5[0, 3.05, 196]	not available	0.192
Pearson 6[0, 8.52, 25.6, 3.31]	not available	0.192
Triangular[0, 321, 32.1]	not available	0.364
Uniform[0, 284]	not available	0.443
Weibull[0, 1.47, 107]	not available	0.266

Log-Logistic

minimum	= 0 [fixed]
p	= 2.76273
beta	= 71.8828

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	10
ks stat	0.189
alpha	0.05
ks stat[10,0.05]	0.409
p-value	0.803
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 4

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 4.21, 74.7)	95.5	accept
Pearson 5(0, 5.96, 426)	83.6	accept
Pearson 6(0, 48.8, 14.5, 9.28)	64.1	accept
Lognormal(0, 4.36, 0.435)	58.2	accept
Inverse Gaussian(0, 417, 86.4)	55.1	accept
Beta(0, 186, 3.75, 5.31)	51.8	accept
Erlang(0, 5, 17.3)	35.8	accept
Gamma(0, 5.06, 17.1)	35.3	accept
Weibull(0, 2.15, 98.2)	26.3	accept
Exponential(0, 86.4)	5.09	accept
Uniform(0, 186)	3.55	accept
Triangular	no fit	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Oil Seal pada Mesin 4

goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 186, 3.75, 5.31)	not available	0.221
Erlang(0, 5, 17.3)	not available	0.286
Exponential(0, 86.4)	not available	0.377
Gamma(0, 5.06, 17.1)	not available	0.287
Inverse Gaussian(0, 417, 86.4)	not available	0.26
Log-Logistic(0, 4.21, 74.7)	not available	0.204
Lognormal(0, 4.36, 0.435)	not available	0.254
Pareto	no fit	no fit
Pearson 5(0, 5.96, 426)	not available	0.226
Pearson 6(0, 48.8, 14.5, 9.28)	not available	0.247
Triangular	no fit	no fit
Uniform(0, 186)	not available	0.359
Weibull(0, 2.15, 98.2)	not available	0.307

Log-Logistic

minimum = 0 [fixed]

p = 4.21473

beta = 74.7484

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points 10

ks stat 0.204

alpha 0.05

ks stat(10,0.05) 0.409

p-value 0.73

result DO NOT REJECT

Distribusi waktu antar kerusakan komponen Relay pada Mesin 4

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 4.11, 66.6)	88.5	accept
Pearson 5(0, 6.72, 426)	86.7	accept
Lognormal(0, 4.22, 0.404)	73.2	accept
Inverse Gaussian(0, 426, 74.4)	72.9	accept
Pearson 6(0, 89.5, 11.1, 14.4)	70.7	accept
Weibull(0, 2.49, 84.2)	63.5	accept
Erlang(0, 6, 12.4)	62.7	accept
Gamma(0, 6.06, 12.3)	61.6	accept
Beta(0, 147, 3.71, 4.18)	56.7	accept
Triangular(0, 166, 51)	55.8	accept
Uniform(0, 147)	8.77	accept
Exponential(0, 74.4)	0.711	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Relay pada Mesin 4
goodness of fit

data points	13
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta[0, 147, 3.71, 4.18]	not available	0.21
Erlang[0, 6, 12.4]	not available	0.225
Exponential[0, 74.4]	not available	0.408
Gamma[0, 6.06, 12.3]	not available	0.226
Inverse Gaussian[0, 426, 74.4]	not available	0.212
Log-Logistic[0, 4.11, 66.6]	not available	0.193
Lognormal[0, 4.22, 0.404]	not available	0.212
Pareto	no fit	no fit
Pearson 5[0, 6.72, 426]	not available	0.196
Pearson 6[0, 89.5, 11.1, 14.4]	not available	0.215
Triangular[0, 166, 51]	not available	0.18
Uniform[0, 147]	not available	0.265
Weibull[0, 2.49, 84.2]	not available	0.223

Log-Logistic

minimum = 0 [fixed]
p = 4.11164
beta = 66.6087

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	13
ks stat	0.193
alpha	0.05
ks stat(13,0.05)	0.361
p-value	0.648
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 4

Auto::Fit Distributions

distribution	rank	acceptance
Log-Logistic(0, 4.78, 98.8)	78	accept
Pearson 5(0, 9.11, 864)	74.1	accept
Weibull(0, 3.06, 119)	69.3	accept
Inverse Gaussian(0, 871, 106)	69	accept
Lognormal(0, 4.61, 0.341)	68.7	accept
Pearson 6(0, 157, 14.3, 22.2)	67.4	accept
Gamma(0, 8.59, 12.4)	64.3	accept
Beta(0, 181, 4.71, 3.92)	59.5	accept
Erlang(0, 9, 11.8)	59.4	accept
Triangular(0, 208, 104)	59.2	accept
Uniform(0, 181)	5.19	accept
Exponential(0, 106)	1.18	reject
Pareto	no fit	reject

Uji Distribusi waktu antar kerusakan komponen Contactor Fuse pada Mesin 4
goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 181, 4.71, 3.92)	not available	0.231
Erlang(0, 9, 11.8)	not available	0.259
Exponential(0, 106)	not available	0.436
Gamma(0, 8.59, 12.4)	not available	0.252
Inverse Gaussian(0, 871, 106)	not available	0.246
Log-Logistic(0, 4.78, 98.8)	not available	0.233
Lognormal(0, 4.61, 0.341)	not available	0.246
Pareto	no fit	no fit
Pearson 5(0, 9.11, 864)	not available	0.238
Pearson 6(0, 157, 14.3, 22.2)	not available	0.248
Triangular(0, 208, 104)	not available	0.203
Uniform(0, 181)	not available	0.337
Weibull(0, 3.06, 119)	not available	0.246

Log-Logistic

minimum = 0 [fixed]
 p = 4.78003
 beta = 98.7761

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	10
ks stat	0.233
alpha	0.05
ks stat(10,0.05)	0.409
p-value	0.575
result	DO NOT REJECT

Distribusi waktu antar kerusakan komponen Timer pada Mesin 4

Auto::Fit Distributions

distribution	rank	acceptance
Weibull(0, 2.54, 119)	100	accept
Triangular(0, 194, 136)	75.1	accept
Beta(0, 175, 2.02, 1.61)	72.2	accept
Lognormal(0, 4.53, 0.59)	56.7	accept
Pearson 5(0, 2.39, 177)	30	accept
Uniform(0, 175)	20.1	accept

Uji Distribusi waktu antar kerusakan komponen Timer pada Mesin 4

goodness of fit

data points	10
estimates	maximum likelihood estimates
accuracy of fit	0.0003
level of significance	0.05

summary

distribution	Chi Squared	Kolmogorov Smirnov
Beta(0, 175, 2.02, 1.61)	not available	0.188
Lognormal(0, 4.53, 0.59)	not available	0.231
Pearson 5(0, 2.39, 177)	not available	0.27
Triangular(0, 194, 136)	not available	0.191
Uniform(0, 175)	not available	0.254
Weibull(0, 2.54, 119)	not available	0.148

Weibull

minimum = 0 (fixed)
alpha = 2.54035
beta = 119.05

Chi Squared

too few intervals for chi squared test

Kolmogorov-Smirnov

data points	10
ks stat	0.148
alpha	0.05
ks stat(10,0.05)	0.409
p-value	0.959
result	DO NOT REJECT

Lampiran D

Perhitungan $R(t)$, tp , dan Cp untuk Relay di Mesin Filling 1

tp (hari)	UEC(tp)	$R(t)$
20	41070	0.98
30	29370	0.94
40	24600	0.87
50	22770	0.78
60	22550	0.67
61	22600	0.66
62	22650	0.64
63	22700	0.63
70	23360	0.55
80	24880	0.42
90	26960	0.31
100	29490	0.21

Perhitungan $R(t)$, tp , dan Cp untuk Contactor Fuse di Mesin Filling 1

tp (hari)	UEC(tp)	$R(t)$
20	34640	1.00
30	23610	0.99 °
40	19010	0.96
50	17690	0.90
51	17690	0.89
52	17720	0.88
53	17770	0.87
54	17840	0.86
60	18660	0.79
70	21240	0.64
80	24700	0.48
90	28340	0.35
100	31700	0.25

Perhitungan $R(t)$, tp , dan Cp untuk Timer di Mesin Filling 1

tp (hari)	UEC(tp)	$R(t)$
20	134900	1.00
30	91830	0.98
40	72500	0.94
50	63560	0.86
60	63560	0.75
70	60460	0.63
71	60580	0.62
72	60720	0.60
73	60880	0.59
80	62280	0.50
90	64750	0.39
100	67230	0.30

Perhitungan $R(t)$, tp , dan Cp untuk Relay di Mesin Filling 2

tp (hari)	UEC(tp)	$R(t)$
20	39620	0.995
30	26940	0.987
40	21680	0.946
50	20350	0.849
51	20390	0.836
52	20450	0.822
53	20530	0.807
60	21790	0.690
70	24950	0.504
80	28720	0.339
90	32260	0.220

Perhitungan $R(t)$, tp , dan Cp untuk Oilseal di Mesin Filling 2

tp (hari)	UEC(tp)	R(t)
20	57060	0.99
30	40160	0.96
40	32750	0.92
50	29270	0.86
60	27840	0.79
70	27660	0.71
71	27690	0.70
72	27730	0.69
73	27780	0.68
74	27840	0.67
75	27900	0.66
80	28320	0.62
90	29590	0.52
100	31320	0.43

Perhitungan $R(t)$, tp , dan Cp untuk Contactor Fuse di Mesin Filling 2

tp (hari)	UEC(tp)	R(t)
20	34790	1.00
30	23780	0.99
40	18830	0.97
50	16540	0.93
60	15780	0.87
61	15770	0.86
62	15770	0.85
63	15770	0.84
64	15790	0.83
70	16100	0.78
80	17280	0.68
90	19220	0.56
100	21860	0.43

Perhitungan $R(t)$, tp , dan Cp untuk Timer di Mesin Filling 2

tp (hari)	UEC(tp)	$R(t)$
20	134300	1.00
30	90140	0.99
40	69220	0.97
50	58550	0.93
60	53990	0.85
70	53620	0.73
80	53620	0.58
81	56360	0.57
82	56710	0.55
83	57080	0.54
90	59890	0.44
100	64200	0.33

Perhitungan $R(t)$, tp , dan Cp untuk Relay di Mesin Filling 3

tp (hari)	UEC(tp)	$R(t)$
20	39610	0.998
30	26970	0.986
40	21590	0.949
50	19520	0.875
60	19300	0.768
61	19340	0.756
62	19403	0.744
63	19470	0.731
64	19540	0.719
70	20150	0.641
80	21650	0.509
90	23500	0.387
100	25550	0.282

Perhitungan $R(t)$, tp , dan Cp untuk Oilseal di Mesin Filling 3

tp (hari)	$UEC(tp)$	$R(t)$
20	55590	0.997
30	38664	0.977
40	32580	0.921
50	31650	0.820
51	31730	0.807
52	31850	0.795
53	31990	0.782
60	33540	0.685
70	36990	0.539
80	36990	0.400
90	45950	0.283
100	50750	0.191

Perhitungan $R(t)$, tp , dan Cp untuk Contactor Fuse di Mesin Filling 3

tp (hari)	$UEC(tp)$	$R(t)$
20	37050	0.97
30	28060	0.92
40	25250	0.84
50	24860	0.73
51	24900	0.72
52	24940	0.71
53	24990	0.70
60	25490	0.62
70	26470	0.52
80	27460	0.43
90	28320	0.35

Perhitungan $R(t)$, tp , dan Cp untuk Timer di Mesin Filling 3

tp (hari)	UEC(tp)	$R(t)$
20	136200	0.99
30	94150	0.96
40	75350	0.91
50	66150	0.83
60	61750	0.74
70	59910	0.64
80	59400	0.54
81	59400	0.53
82	59400	0.52
83	59400	0.51
84	59410	0.50
85	59420	0.49
90	59530	0.45
100	59880	0.33

Perhitungan $R(t)$, tp , dan Cp untuk Relay di Mesin Filling 4

tp (hari)	UEC(tp)	$R(t)$
20	40000	0.996
30	28050	0.964
40	23800	0.890
50	23290	0.765
51	23370	0.750
52	23470	0.734
53	23590	0.719
60	24830	0.606
70	27240	0.449
80	29740	0.320
90	31900	0.225
100	33610	0.158

Perhitungan R(t), tp, dan Cp untuk Oilseal di Mesin Filling 4

tp (hari)	UEC(tp)	R(t)
20	55720	0.996
30	38530	0.979
40	31800	0.933
50	30230	0.844
51	30270	0.833
52	30340	0.821
53	30440	0.809
60	31810	0.716
70	35190	0.568
80	39260	0.428
90	43230	0.313
100	46700	0.227

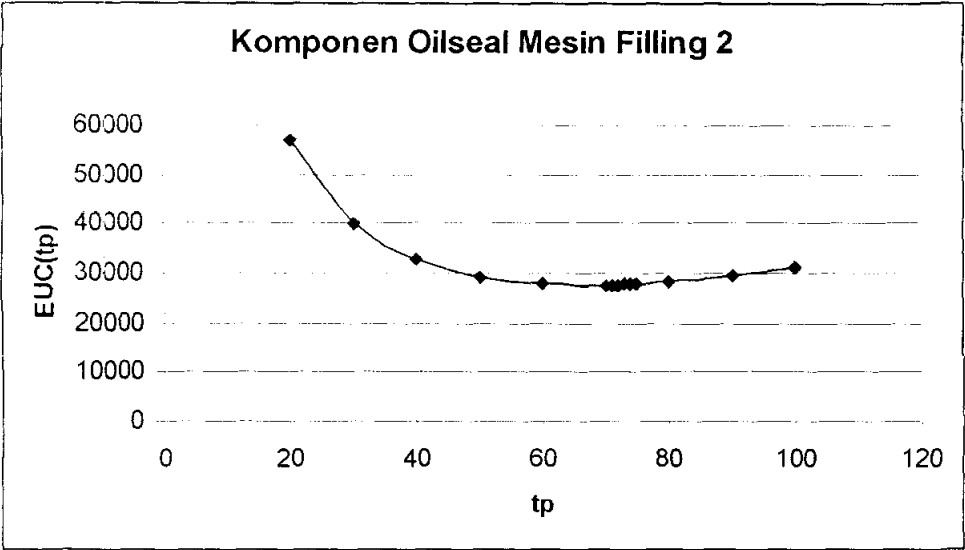
Perhitungan R(t), tp, dan Cp untuk Contactor Fuse di Mesin Filling 4

tp (hari)	UEC(tp)	R(t)
20	34540	1.000
30	23200	0.997
40	17830	0.987
50	15140	0.963
60	14100	0.916
61	14070	0.909
62	14050	0.903
63	14050	0.896
64	14050	0.889
65	14070	0.881
70	14310	0.839
80	15500	0.733
90	17400	0.610

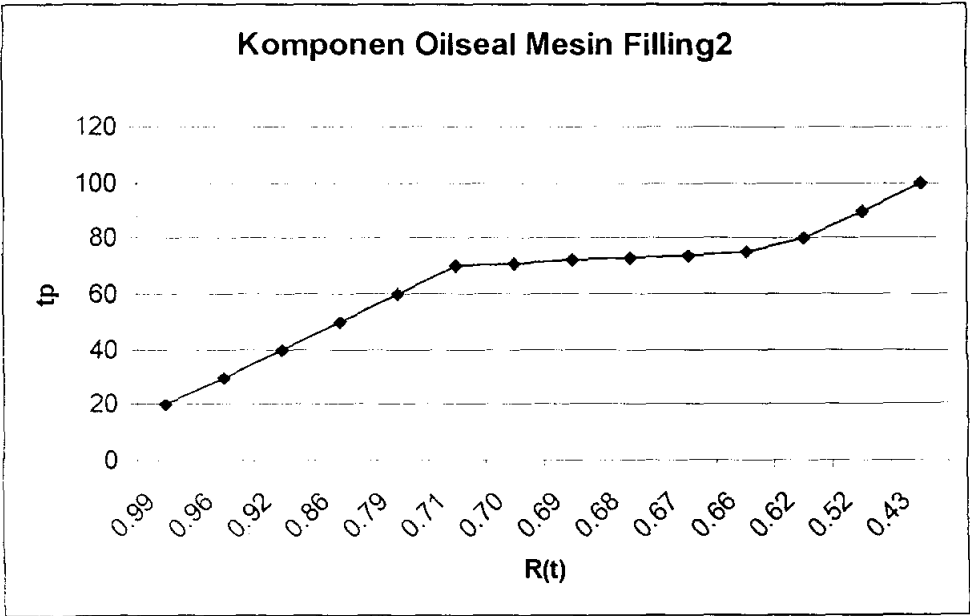
Perhitungan $R(t)$, tp , dan Cp untuk Timer di Mesin Filling 4

tp (hari)	UEC(tp)	$R(t)$
20	135900	0.99
30	92750	0.97
40	72270	0.94
50	61000	0.90
60	54450	0.84
70	50670	0.77
80	48710	0.69
90	48000	0.61
91	47990	0.60
92	47980	0.59
93	47980	0.59
94	47990	0.58
95	48010	0.57
100	48230	0.53
110	49170	0.441
120	50700	0.36

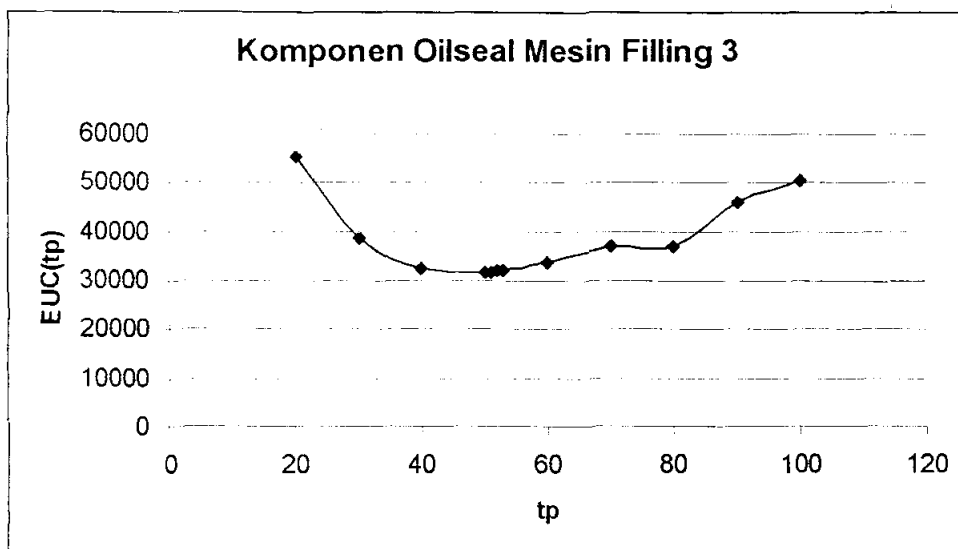
Lampiran E



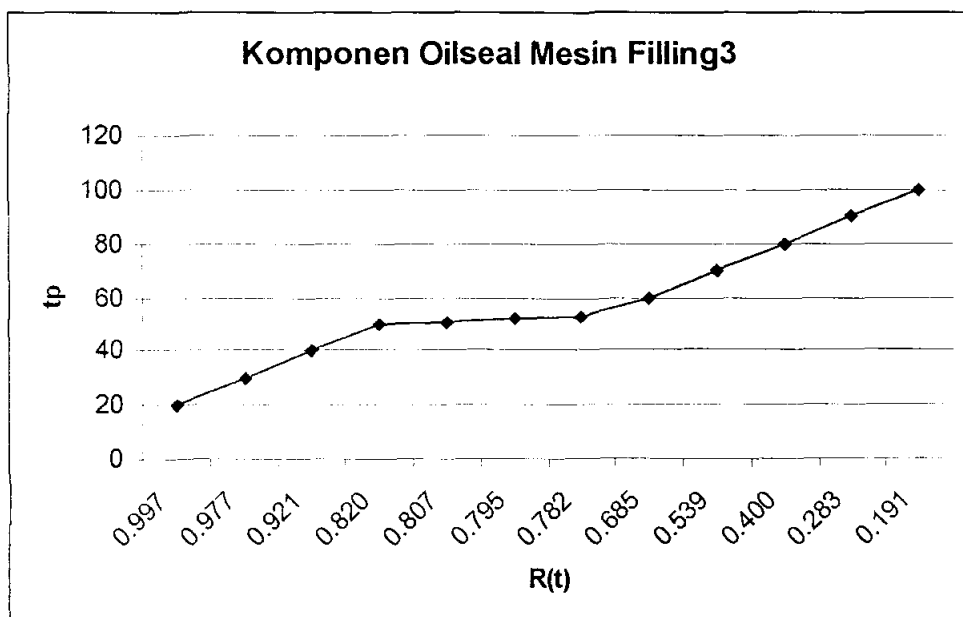
Grafik tp-UEC(t) untuk Oil Seal di Mesin Filling 2



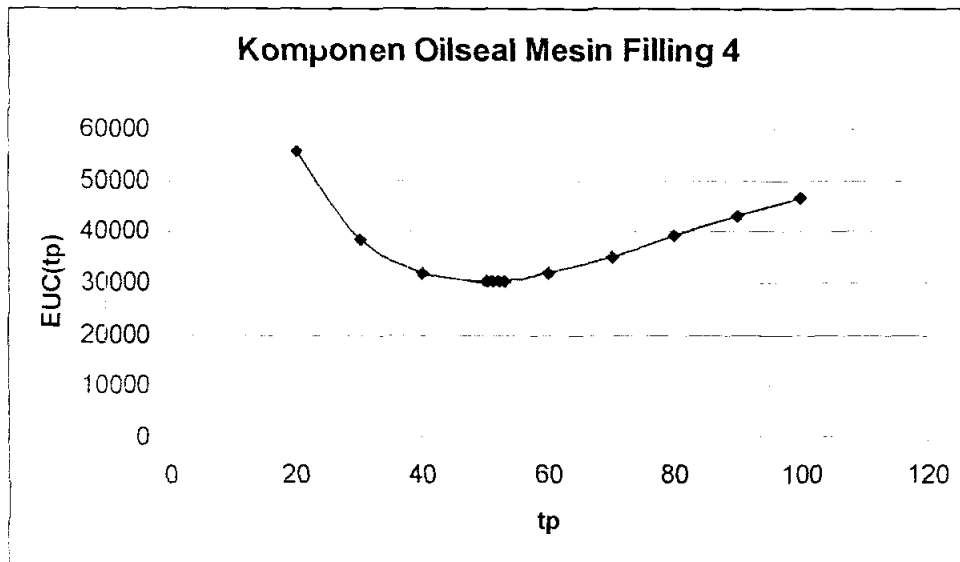
Grafik R(t)-tp untuk Oil Seal di Mesin Filling 2



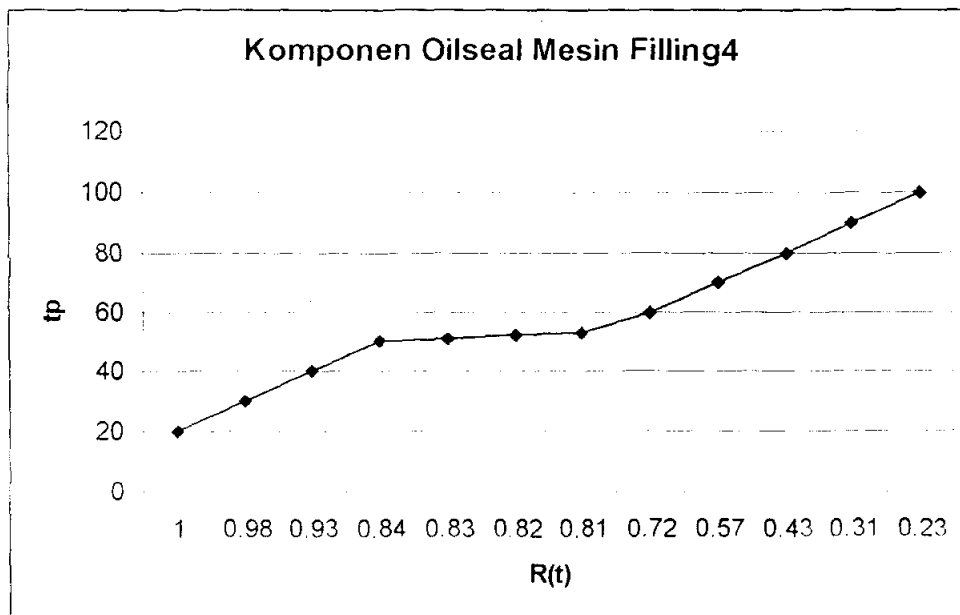
Grafik tp-UEC(t) untuk Oil Seal di Mesin Filling 3



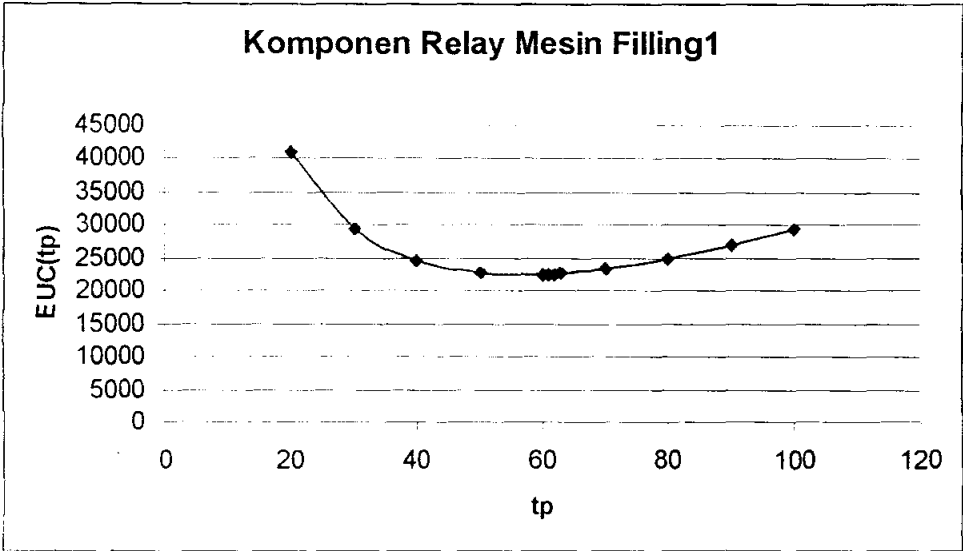
Grafik R(t)-tp untuk Oil Seal di Mesin Filling 3



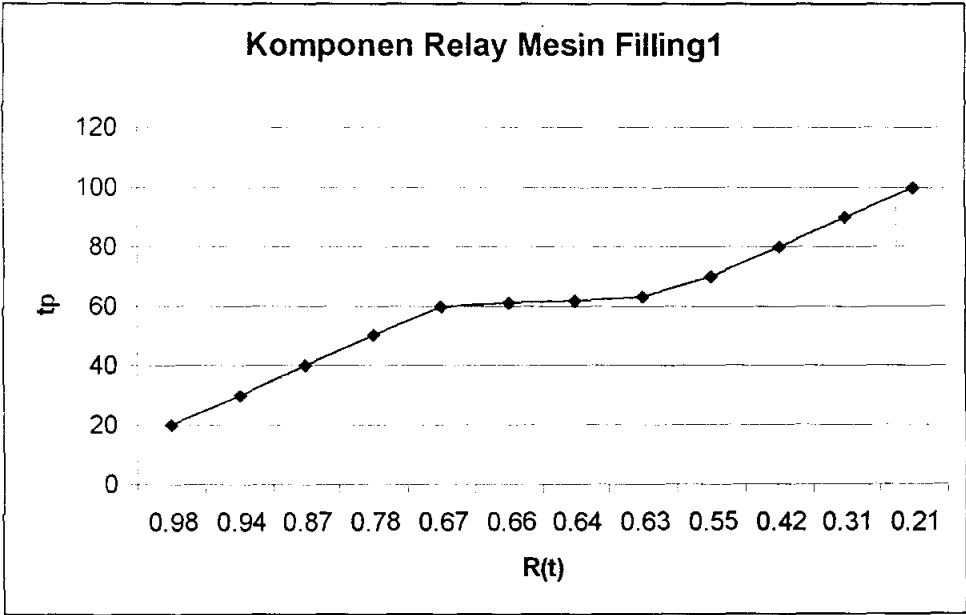
Grafik tp-UEC(t) untuk Oil Seal di Mesin Filling 4



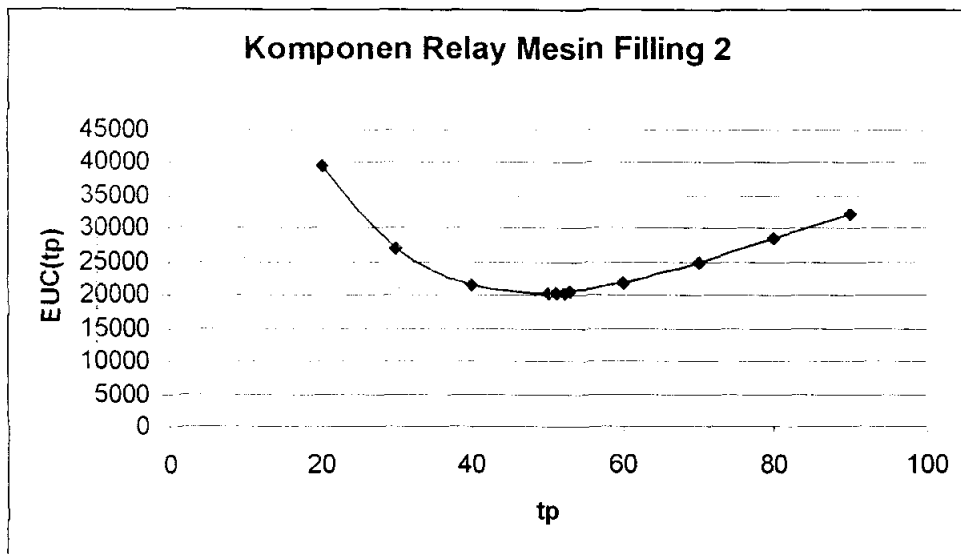
Grafik R(t)-tp untuk Oil Seal di Mesin Filling 4



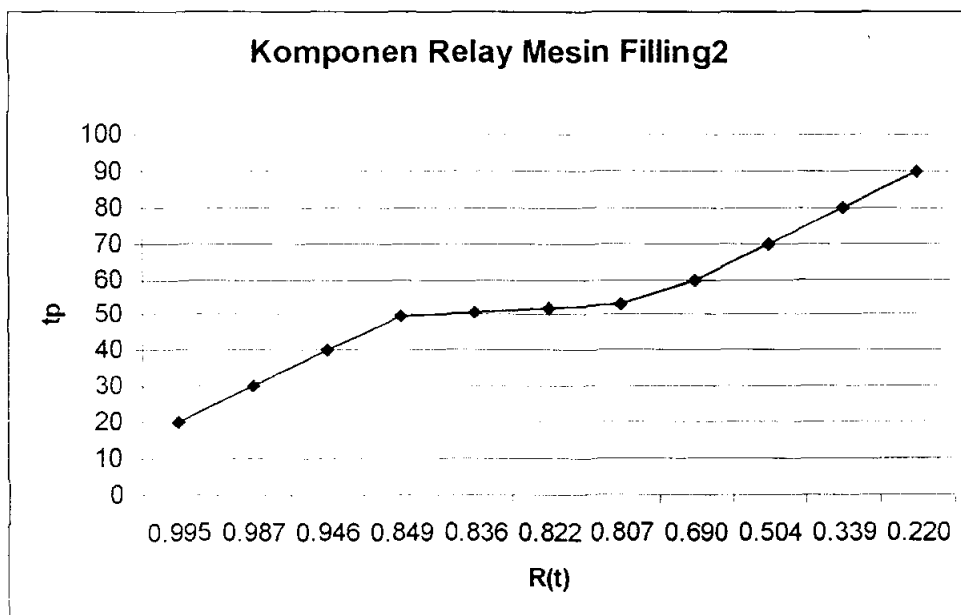
Grafik tp-UEC(t) untuk Relay di Mesin Filling 1



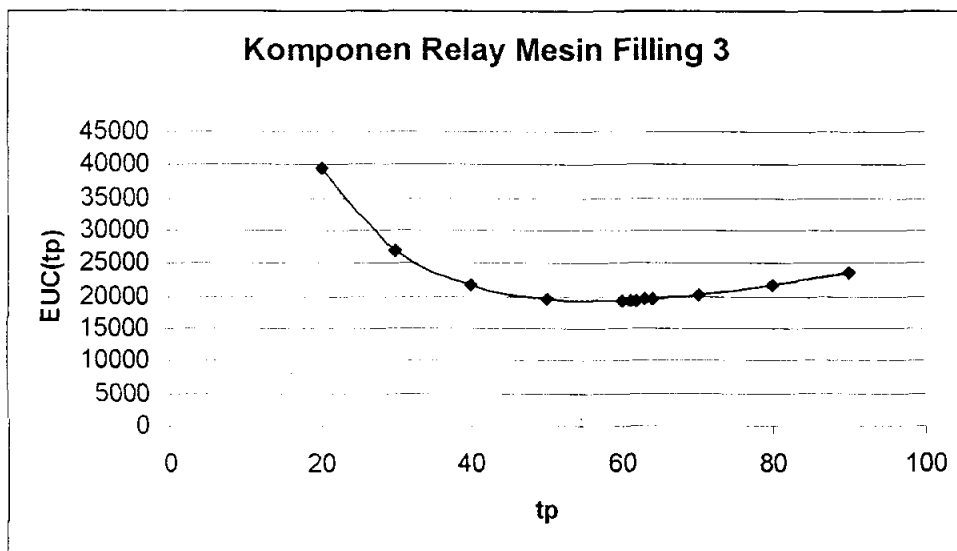
Grafik R(t)-tp untuk Relay di Mesin Filling 1



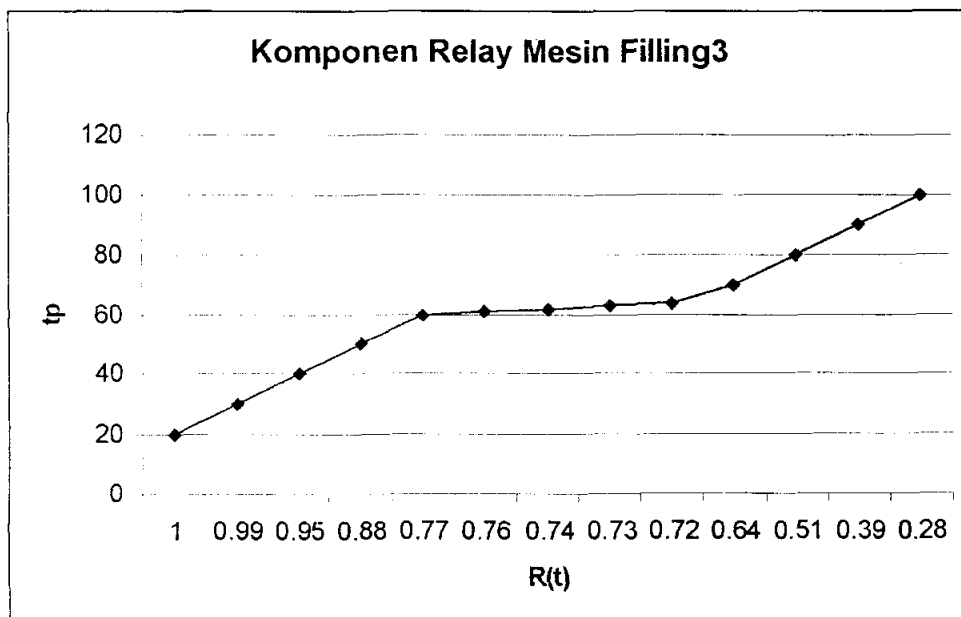
Grafik tp-UEC(t) untuk Relay di Mesin Filling 2



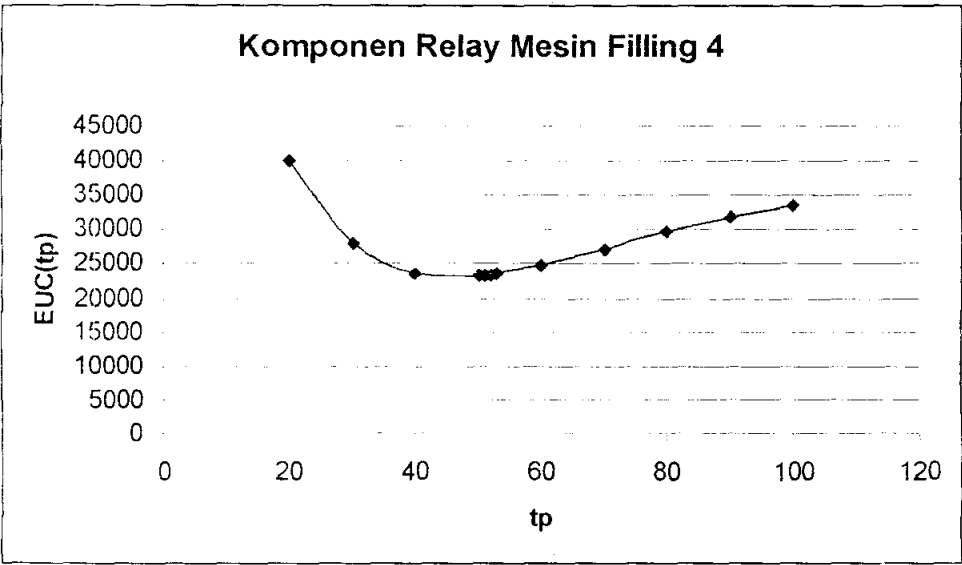
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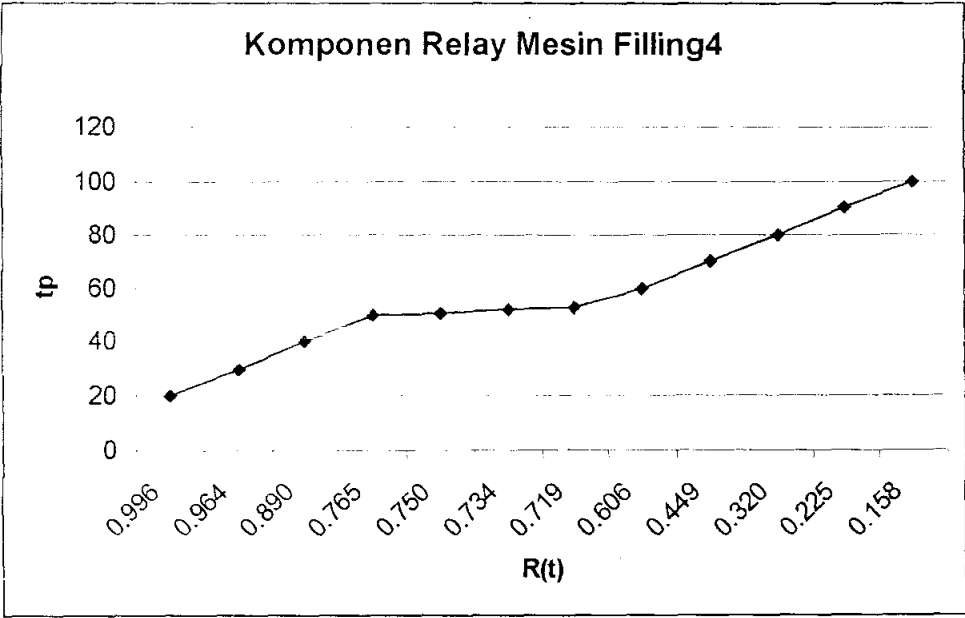
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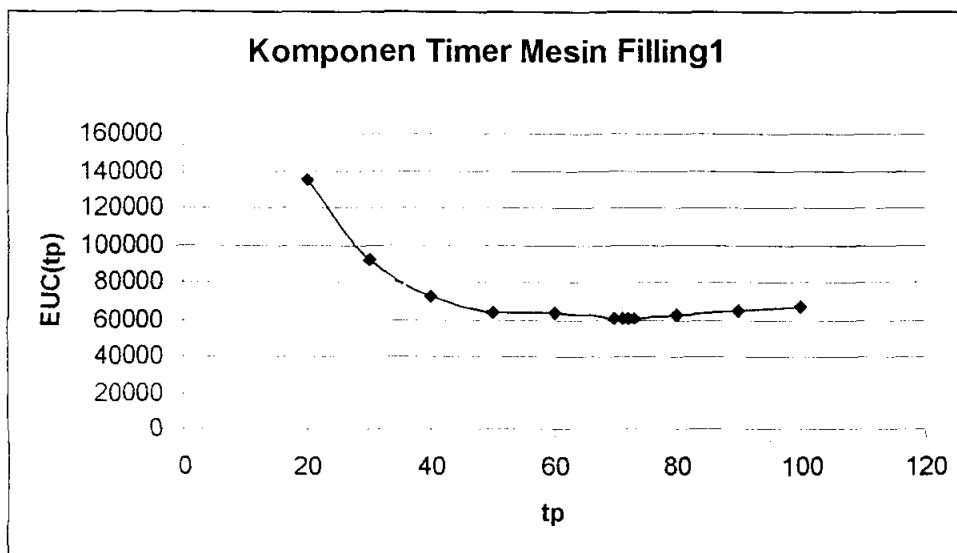
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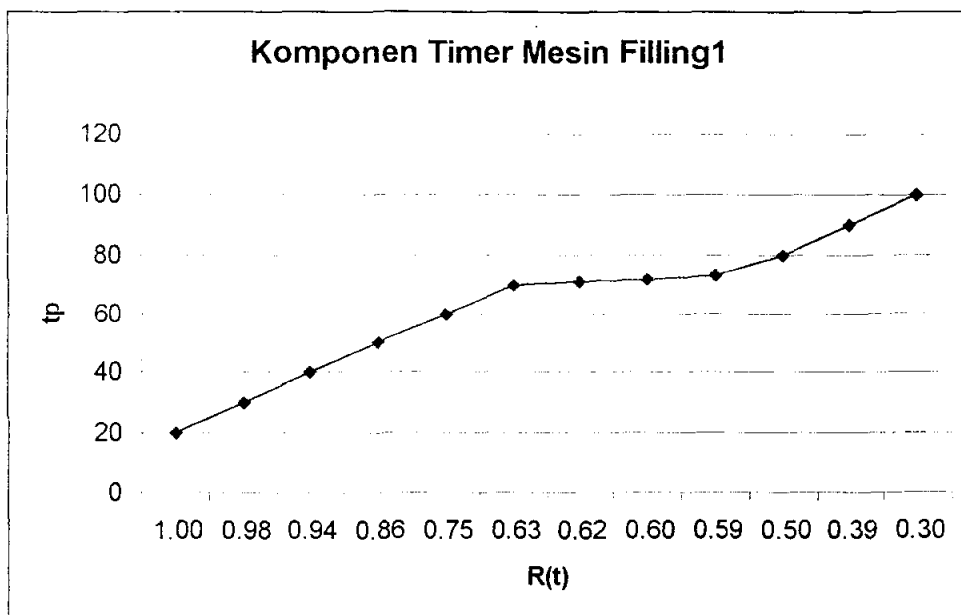
Grafik tp-UEC(t) untuk Relay di Mesin Filling 4



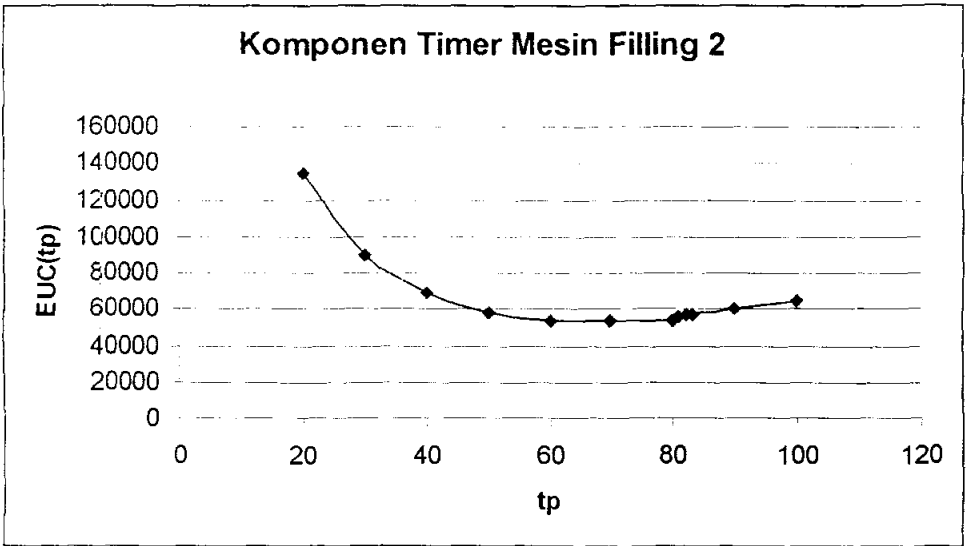
Grafik R(t)-tp untuk Relay di Mesin Filling 4



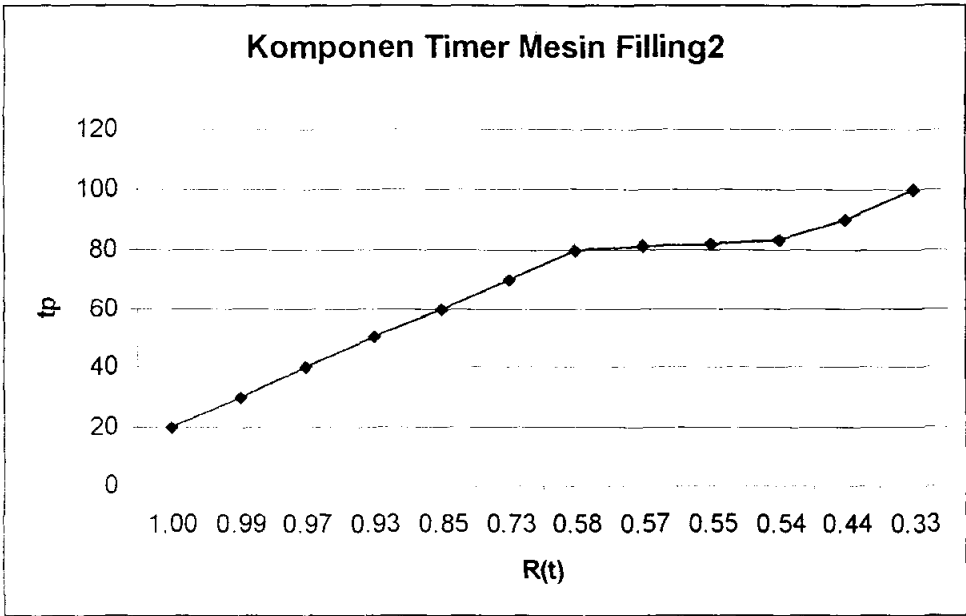
Grafik tp-UEC(t) untuk Timer di Mesin Filling 1



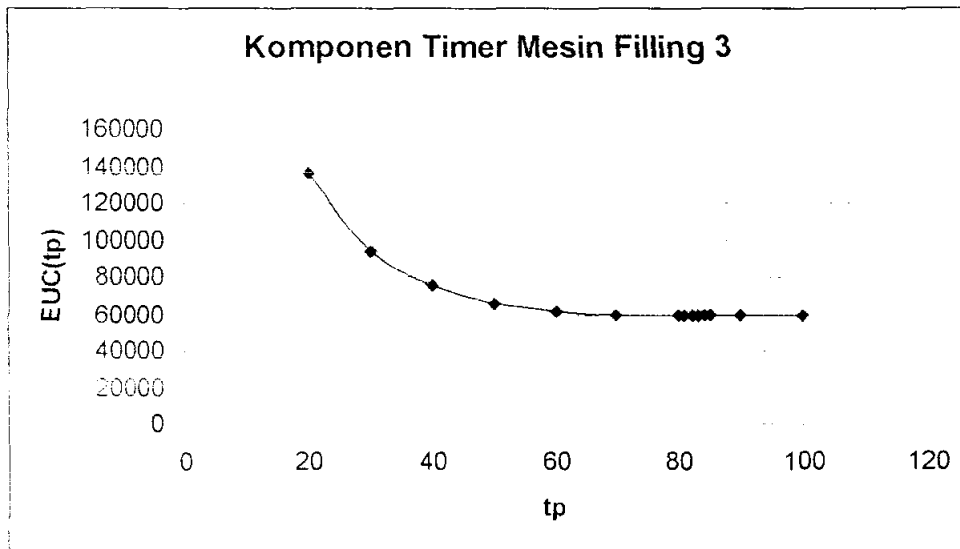
Grafik R(t)-tp untuk Timer di Mesin Filling 1



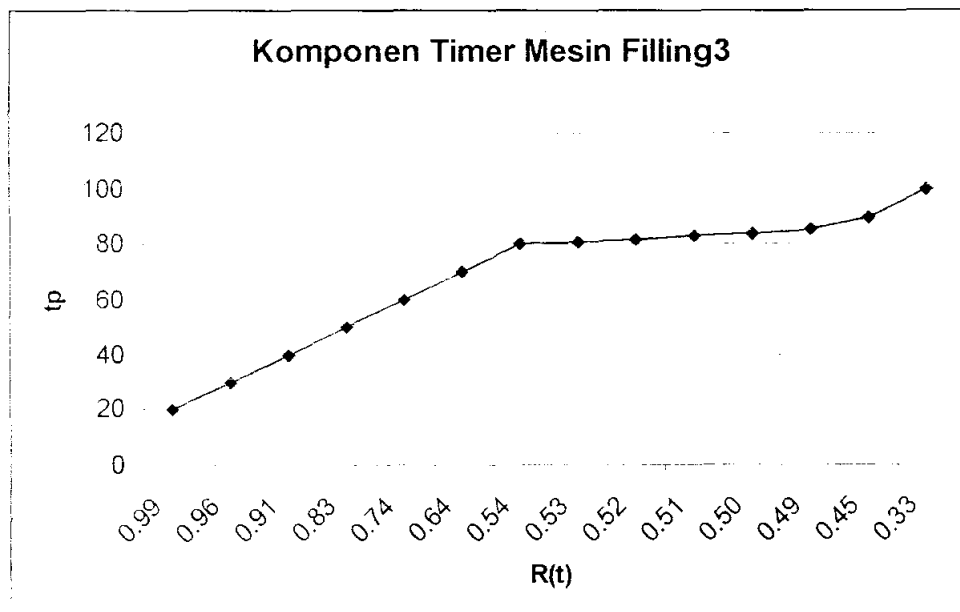
Grafik tp-UEC(t) untuk Timer di Mesin Filling 2



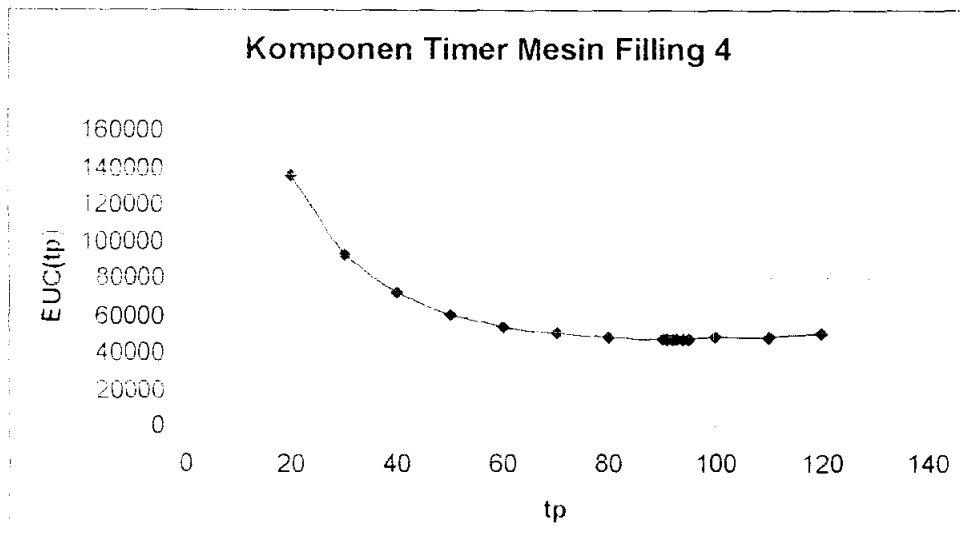
Grafik R(t)-tp untuk Timer di Mesin Filling 2



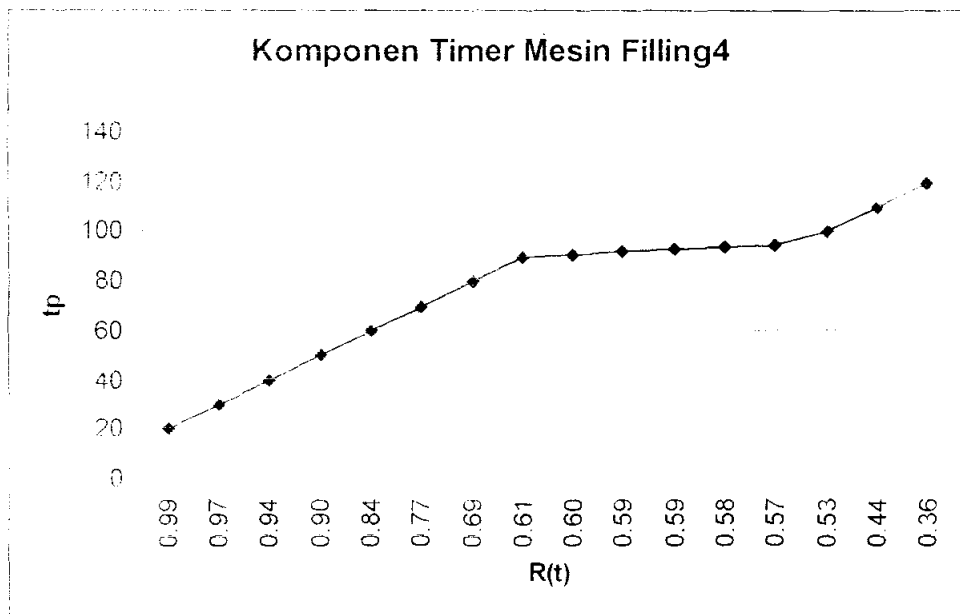
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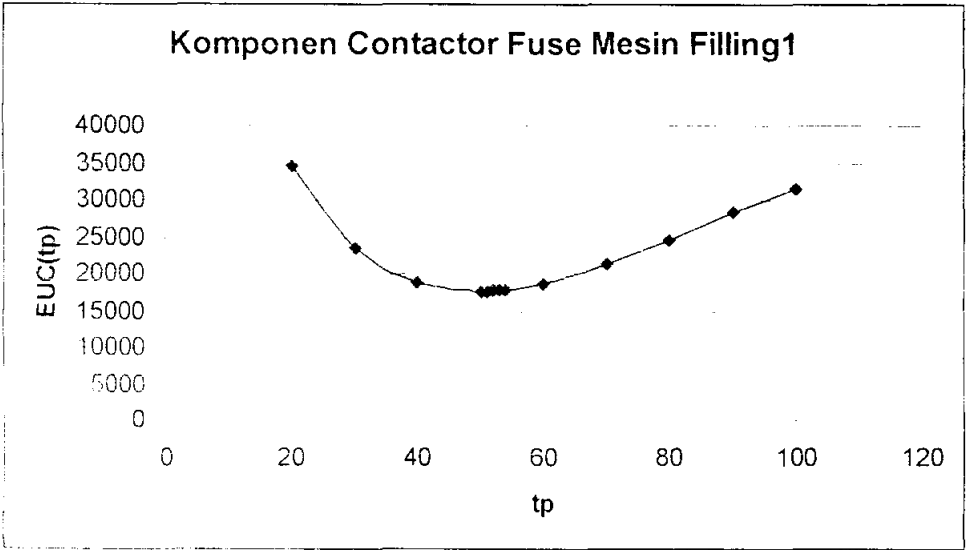
Grafik $R(t)$ - tp untuk Timer di Mesin Filling 3



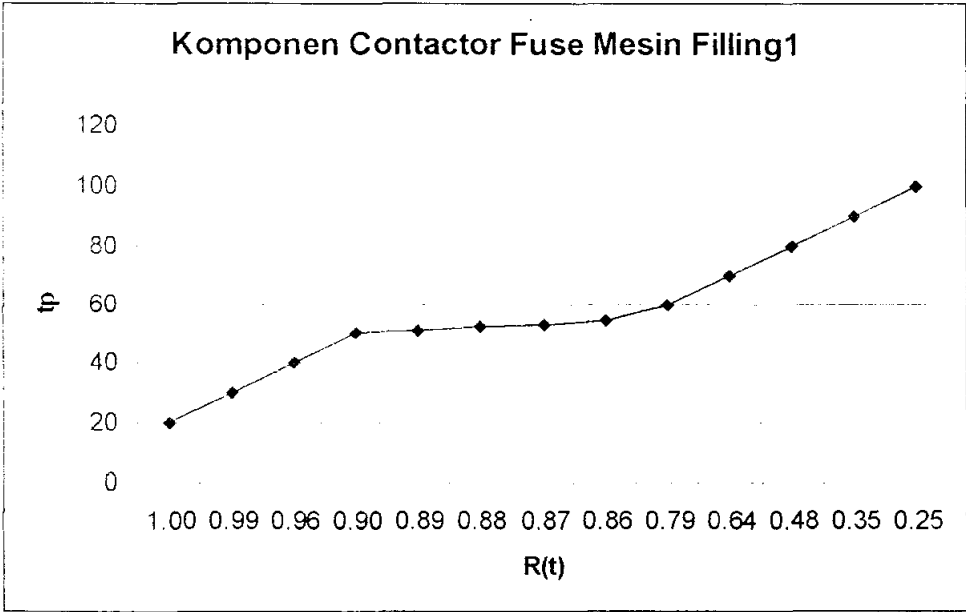
Grafik tp - $EUC(t)$ untuk Timer di Mesin Filling 4



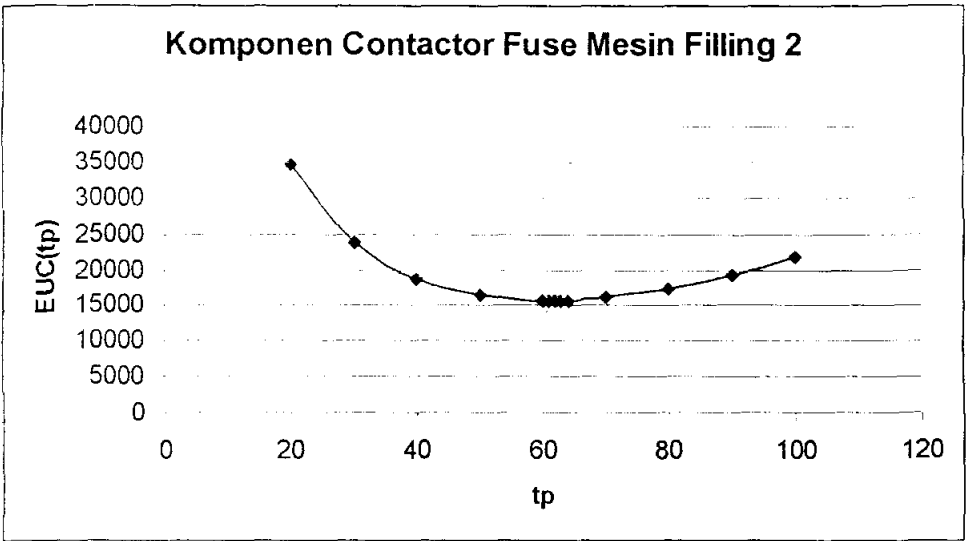
Grafik $R(t)$ - tp untuk Timer di Mesin Filling 4



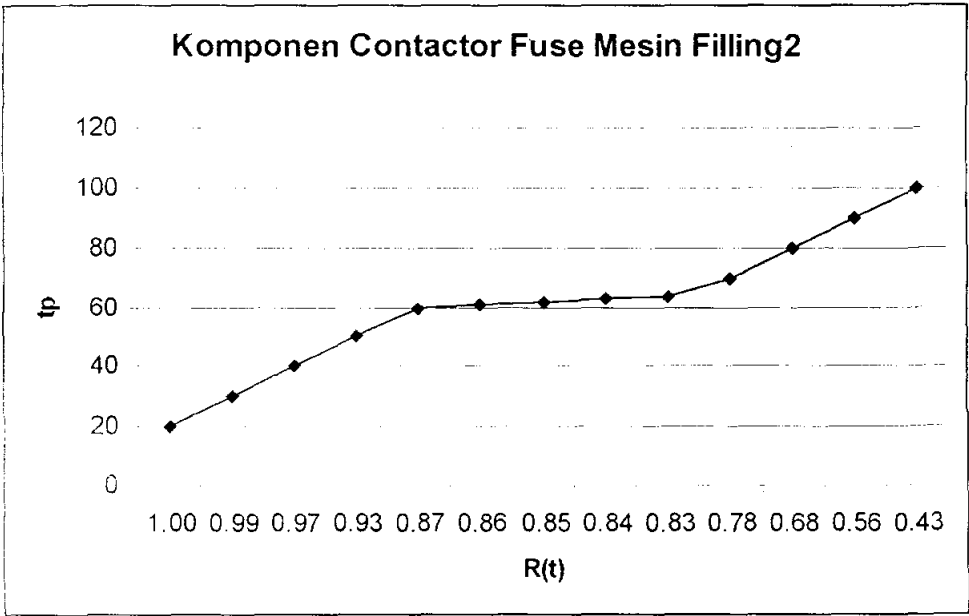
Grafik tp-UEC(t) untuk Contactor Fuse di Mesin Filling 1



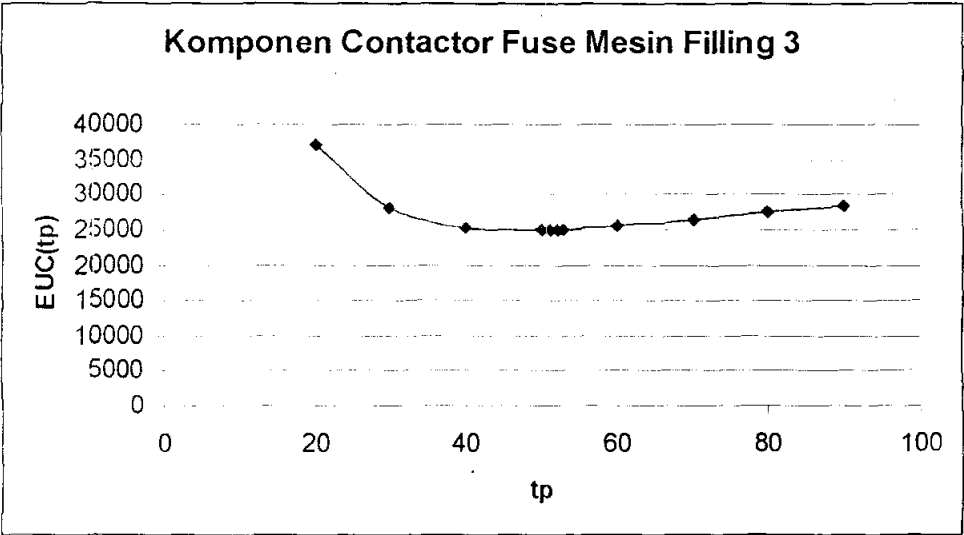
Grafik R(t)-tp untuk Contactor Fuse di Mesin Filling 1



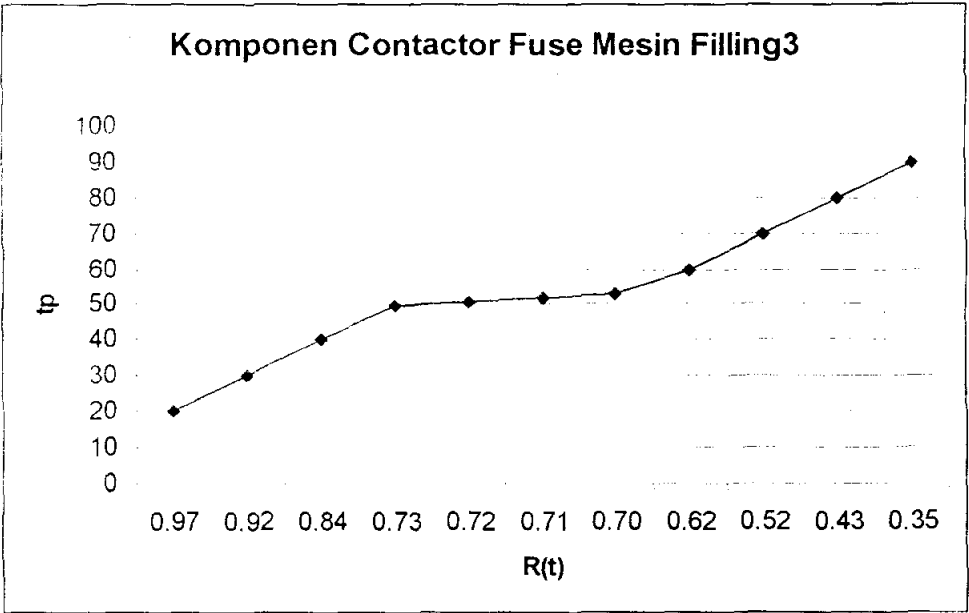
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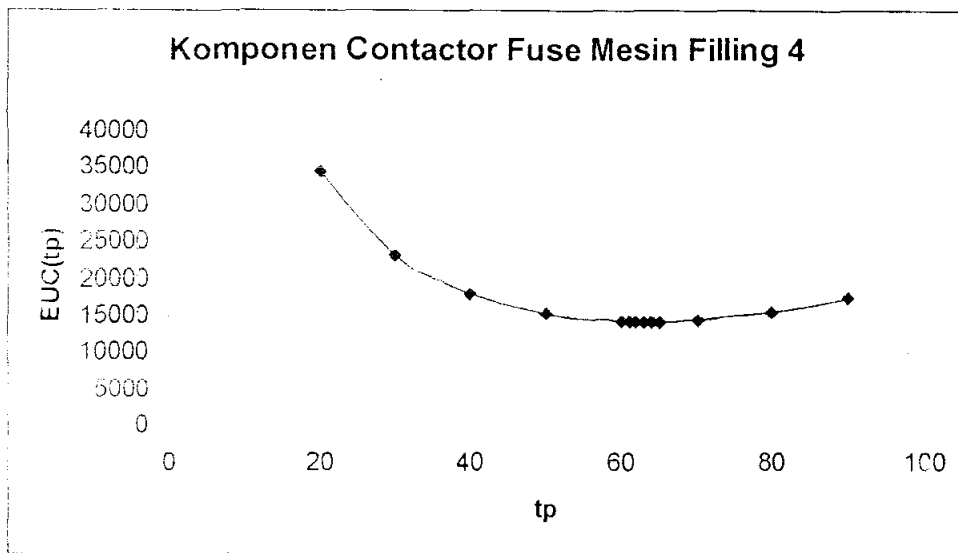
Grafik R(t)-tp untuk Contactor Fuse di Mesin Filling 2



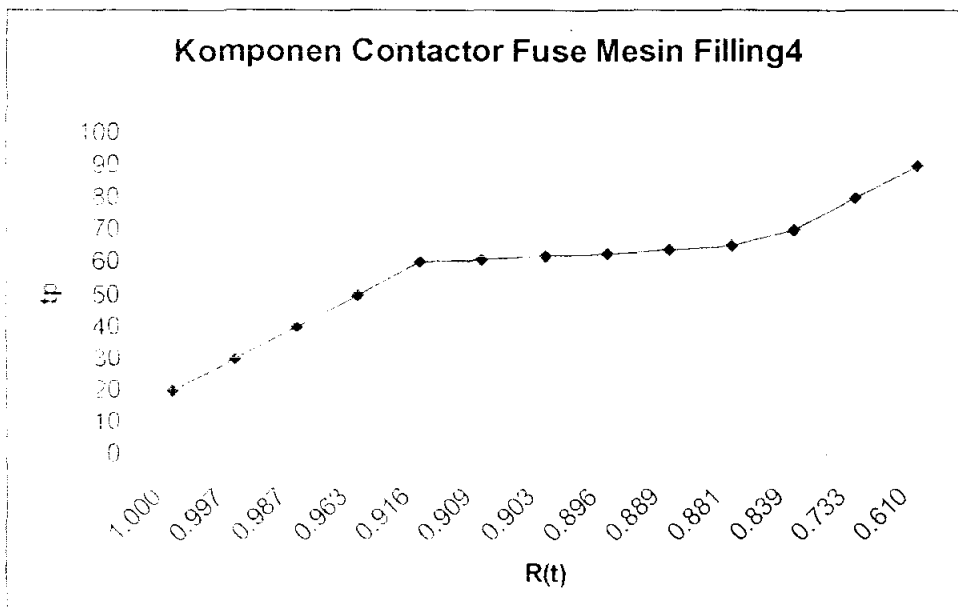
Grafik tp-UEC(t) untuk Contactor Fuse di Mesin Filling 3



Grafik R(t)-tp untuk Contactor Fuse di Mesin Filling 3



Grafik tp-UEC(t) untuk Contactor Fuse di Mesin Filling 4



Grafik R(t)-tp untuk Contactor Fuse di Mesin Filling 4