

Análisis de Distribución

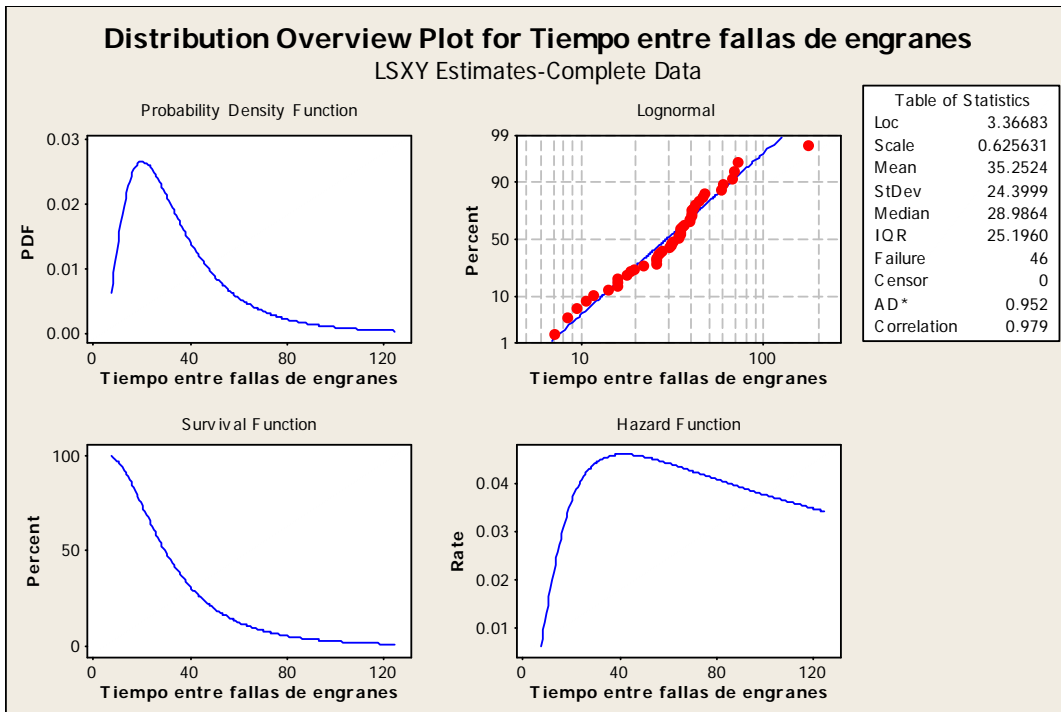


Figura 10 Análisis de confiabilidad de la falla de engranes de la máquina de afelpado

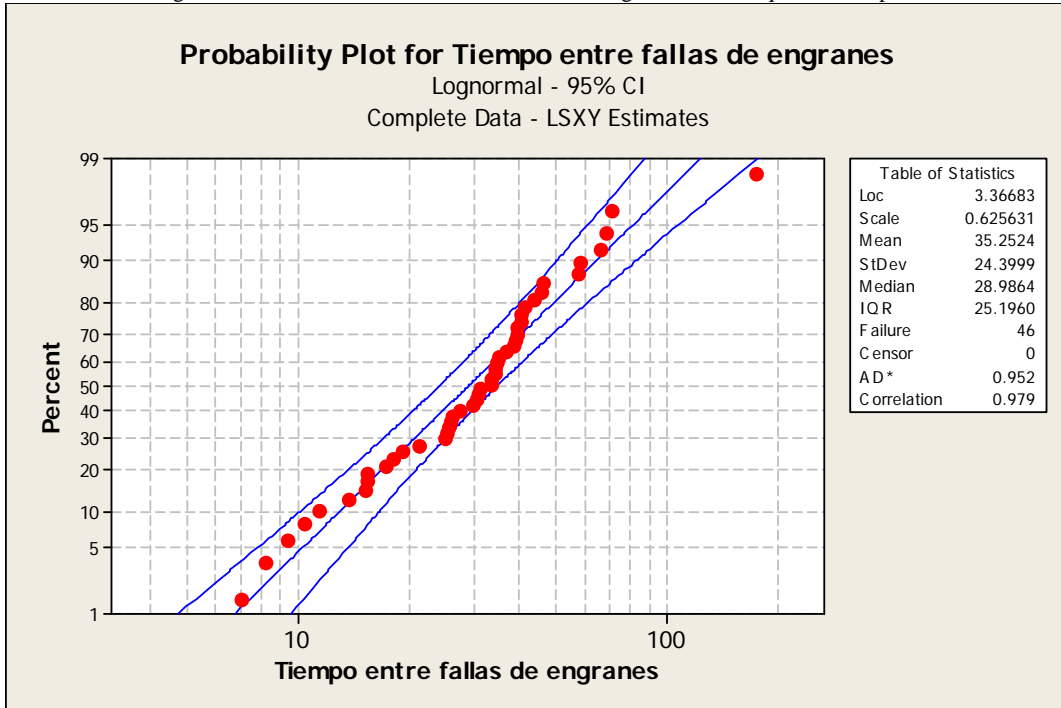


Figura 11 Gráfica de probabilidad de fallas de engranes de la máquina de afelpado.

Table of Percentiles

Percent	Percentile	Standard Error	95.0% Normal CI	
			Lower	Upper
1	6.76249	1.22639	4.73959	9.64880
2	8.02000	1.33020	5.79421	11.1008
3	8.93650	1.39719	6.57787	12.1409
4	9.69435	1.44818	7.23374	12.9920
5	10.3580	1.49014	7.81299	13.7319
6	10.9585	1.52628	8.34057	14.3981
7	11.5136	1.55839	8.83076	15.0114
8	12.0344	1.58756	9.29257	15.5853
9	12.5285	1.61452	9.73213	16.1285
10	13.0013	1.63979	10.1538	16.6473
20	17.1206	1.85186	13.8499	21.1636
30	20.8790	2.06141	17.2056	25.3367
40	24.7376	2.32035	20.5834	29.7303
50	28.9864	2.67383	24.1922	34.7306
60	33.9649	3.18585	28.2611	40.8199
70	40.2419	3.97311	33.1618	48.8335
80	49.0760	5.30835	39.7007	60.6653
90	64.6252	8.15085	50.4713	82.7484
91	67.0638	8.64235	52.0950	86.3337
92	69.8173	9.21018	53.9106	90.4175
93	72.9757	9.87741	55.9714	95.1459
94	76.6723	10.6788	58.3559	100.738
95	81.1174	11.6699	61.1867	107.540
96	86.6701	12.9472	64.6716	116.152
97	94.0201	14.6997	69.2052	127.733
98	104.764	17.3762	75.6892	145.009
99	124.246	22.5321	87.0793	177.275

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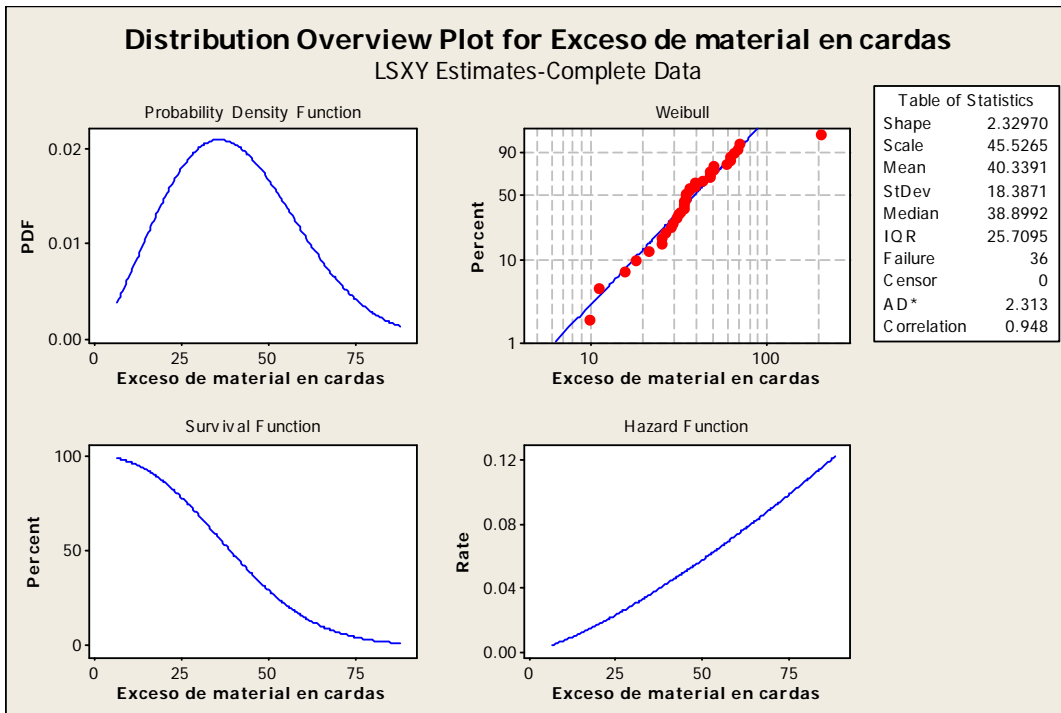


Figura 12 Análisis de confiabilidad de exceso de material en cardas de la máquina de afelpado

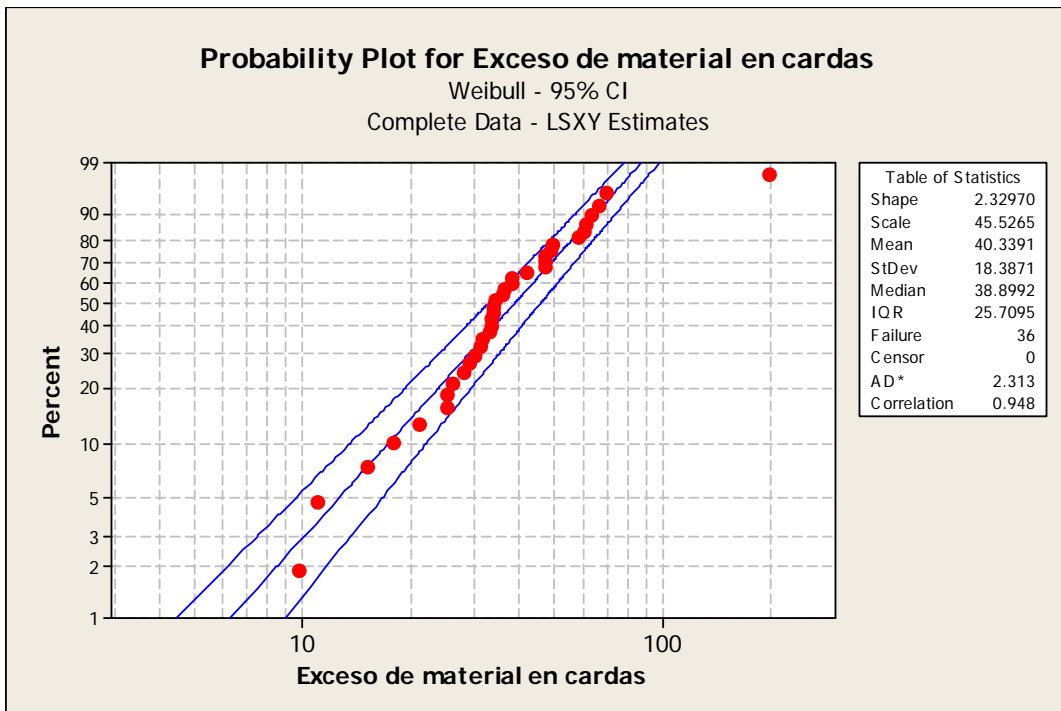


Figura 13 Gráfica de probabilidad de exceso de material en cardas de la máquina de afelpado.

Table of Percentiles

Percent	Percentile	Standard Error	95.0% Normal CI	
			Lower	Upper
1	6.32008	1.12229	4.46242	8.95106
<b>2</b>	<b>8.52865</b>	<b>1.37603</b>	<b>6.21649</b>	<b>11.7008</b>
3	10.1723	1.54514	7.55305	13.6997
4	11.5347	1.67501	8.67758	15.3325
5	12.7225	1.78168	9.66871	16.7408
6	13.7891	1.87283	10.5664	17.9948
7	14.7659	1.95279	11.3943	19.1351
8	15.6728	2.02429	12.1676	20.1877
9	16.5237	2.08912	12.8969	21.1702
10	17.3285	2.14857	13.5900	22.0954
20	23.9140	2.57842	19.3586	29.5412
30	29.2471	2.87004	24.1298	35.4496
40	34.1227	3.10533	28.5483	40.7856
50	38.8992	3.31437	32.9166	45.9691
60	43.8498	3.51457	37.4752	51.3088
70	49.3024	3.72159	42.5222	57.1638
80	55.8441	3.95879	48.5999	64.1681
90	65.1241	4.28853	57.2386	74.0960
91	66.3869	4.33365	58.4140	75.4480
92	67.7618	4.38299	59.6935	76.9206
93	69.2769	4.43767	61.1031	78.5442
94	70.9730	4.49934	62.6803	80.3628
95	72.9119	4.57051	64.4823	82.4435
96	75.1954	4.65542	66.6028	84.8965
97	78.0097	4.76190	69.2133	87.9242
98	81.7611	4.90744	72.6869	91.9681
99	87.6911	5.14724	78.1614	98.3827

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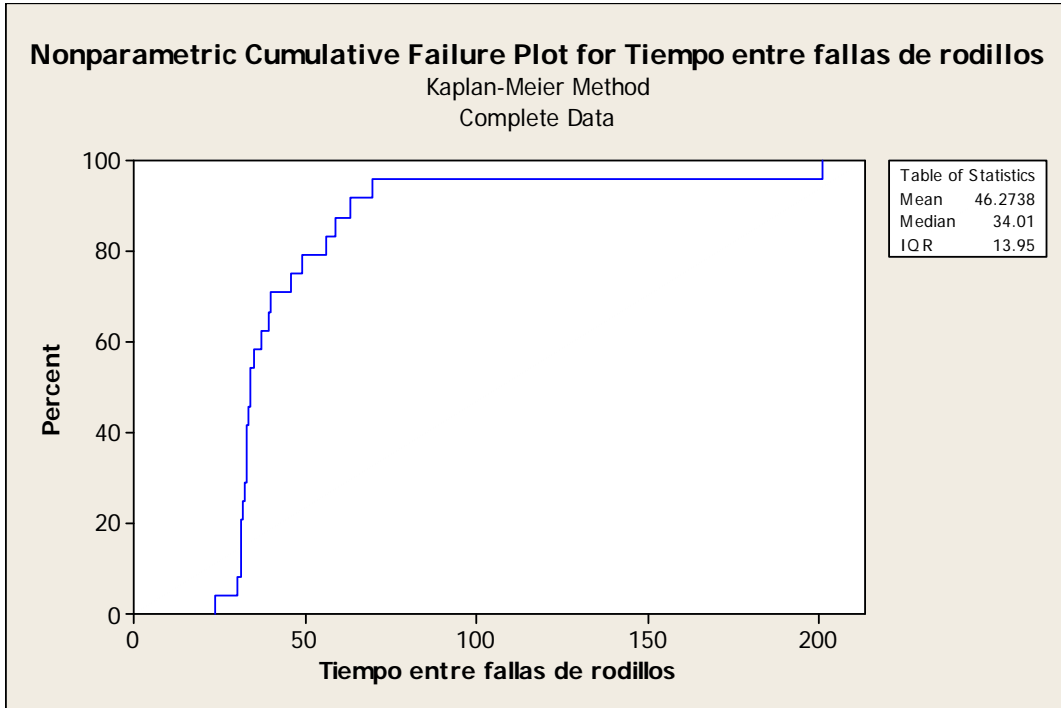


Figura 14 Función de distribución acumulativa Kaplan - Meier para fallas de rodillos en la máquina de afelpado.

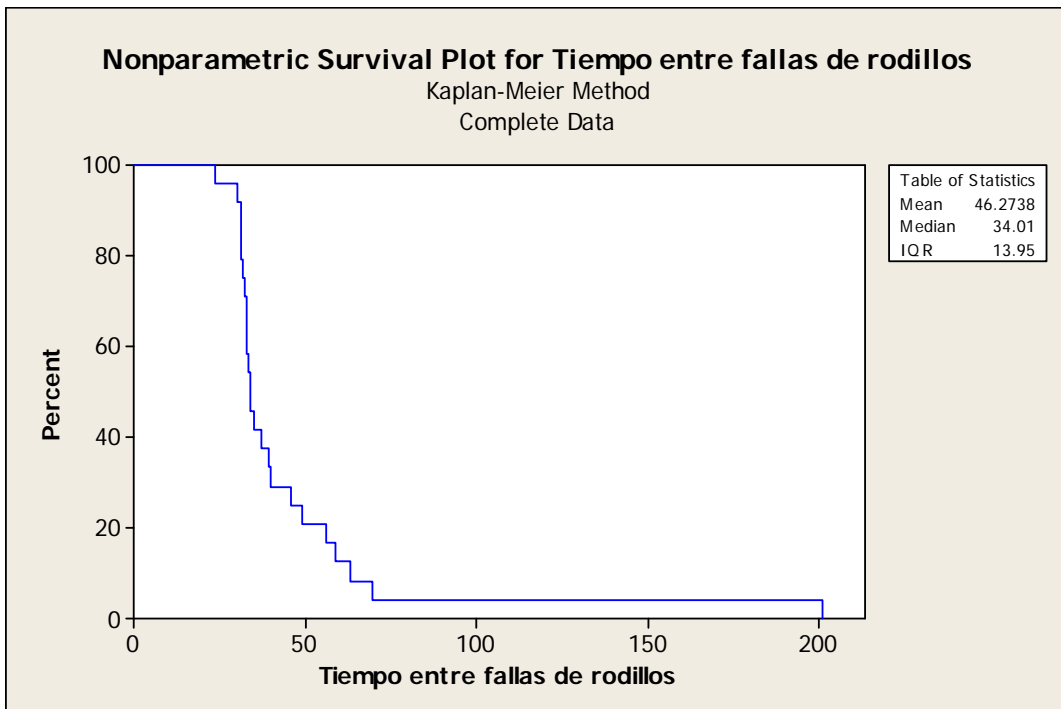


Figura 15 Función de distribución Kaplan - Meier para fallas de rodillos en la máquina de afelpado.

## Kaplan-Meier Estimates

Time	Number		Survival Probability	Standard Error	95.0% Normal CI	
	at Risk	Number Failed			Lower	Upper
23.58	24	1	0.958333	0.040789	0.878388	1.00000
30.18	23	1	0.916667	0.056417	0.806092	1.00000
31.17	22	1	0.875000	0.067508	0.742687	1.00000
31.25	21	1	0.833333	0.076073	0.684234	0.98243
31.51	20	1	0.791667	0.082898	0.629189	0.95414
32.09	19	1	0.750000	0.088388	0.576762	0.92324
<b>32.25</b>	<b>18</b>	<b>1</b>	<b>0.708333</b>	<b>0.092780</b>	<b>0.526487</b>	<b>0.89018</b>
33.12	17	1	0.666667	0.096225	0.478069	0.85526
33.13	16	1	0.625000	0.098821	0.431314	0.81869
33.21	15	1	0.583333	0.100635	0.386093	0.78057
33.34	14	1	0.541667	0.101707	0.342324	0.74101
34.01	13	1	0.500000	0.102062	0.299962	0.70004
34.17	12	1	0.458333	0.101707	0.258991	0.65768
35.23	11	1	0.416667	0.100635	0.219427	0.61391
37.30	10	1	0.375000	0.098821	0.181314	0.56869
39.40	9	1	0.333333	0.096225	0.144736	0.52193
40.20	8	1	0.291667	0.092780	0.109820	0.47351
46.04	7	1	0.250000	0.088388	0.076762	0.42324
49.20	6	1	0.208333	0.082898	0.045856	0.37081
56.36	5	1	0.166667	0.076073	0.017567	0.31577
59.21	4	1	0.125000	0.067508	0.000000	0.25731
63.24	3	1	0.083333	0.056417	0.000000	0.19391
70.11	2	1	0.041667	0.040789	0.000000	0.12161
201.27	1	1	0.000000	0.000000	0.000000	0.00000

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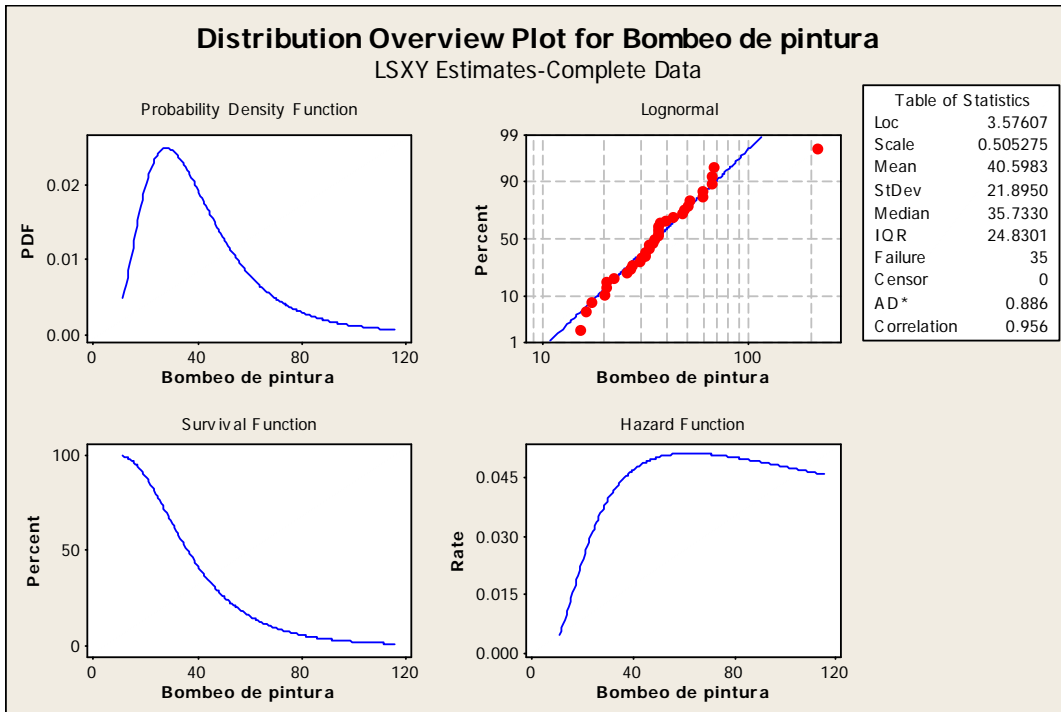


Figura 16 Análisis de confiabilidad de bombeo de pintura de la máquina de estampado.

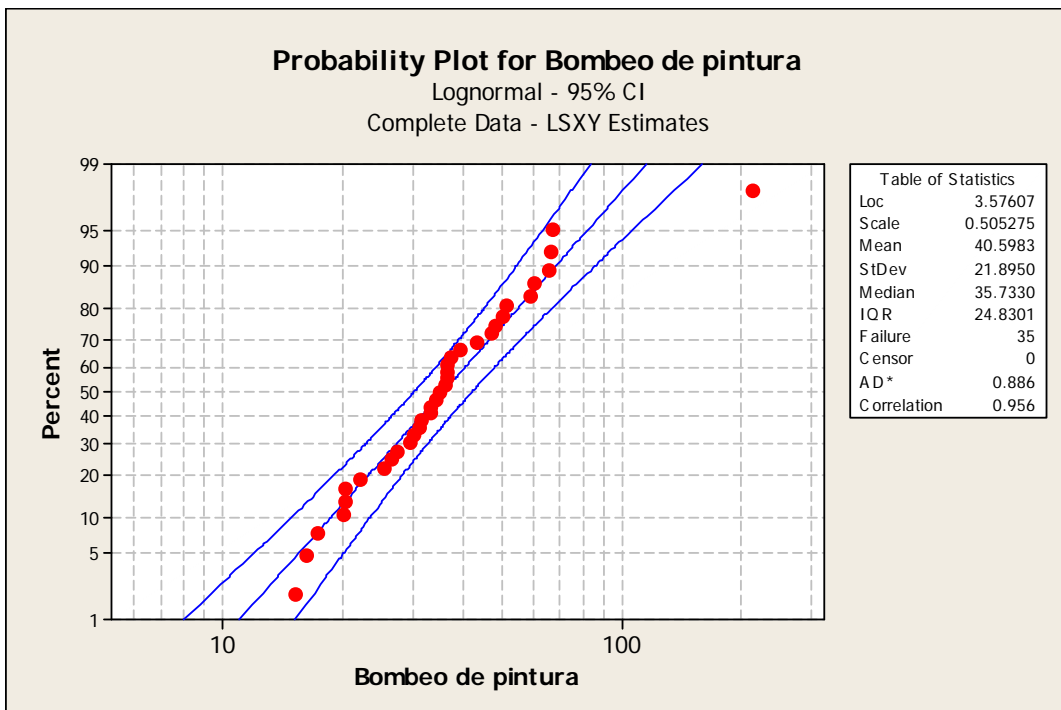


Figura 17 Gráfica de probabilidad de bombeo de pintura de la máquina de estampado.

Table of Percentiles

Percent	Percentile	Standard Error	95.0% Normal CI	
			Lower	Upper
1	11.0301	1.82534	7.97475	15.2561
2	12.6590	1.91787	9.40673	17.0356
3	13.8150	1.97448	10.4399	18.2813
4	14.7537	2.01607	11.2872	19.2849
5	15.5642	2.04943	12.0238	20.1469
<b>6</b>	<b>16.2889</b>	<b>2.07763</b>	<b>12.6860</b>	<b>20.9152</b>
7	16.9521	2.10234	13.2942	21.6166
8	17.5688	2.12457	13.8614	22.2678
9	18.1492	2.14498	14.3965	22.8800
10	18.7003	2.16404	14.9054	23.4612
20	23.3553	2.32664	19.2127	28.3911
30	27.4155	2.49997	22.9285	32.7805
40	31.4395	2.72866	26.5215	37.2694
50	35.7330	3.05185	30.2253	42.2443
60	40.6129	3.52483	34.2600	48.1438
70	46.5739	4.24700	38.9514	55.6881
80	54.6705	5.44625	44.9736	66.4584
90	68.2796	7.90147	54.4237	85.6631
91	70.3530	8.31476	55.8062	88.6917
92	72.6768	8.78868	57.3405	92.1150
93	75.3207	9.34098	59.0679	96.0455
94	78.3874	9.99820	61.0488	100.650
95	82.0377	10.8024	63.3768	106.193
96	86.5440	11.8261	66.2097	113.123
97	92.4246	13.2095	69.8444	122.305
98	100.865	15.2814	74.9516	135.738
99	115.760	19.1568	83.6945	160.111



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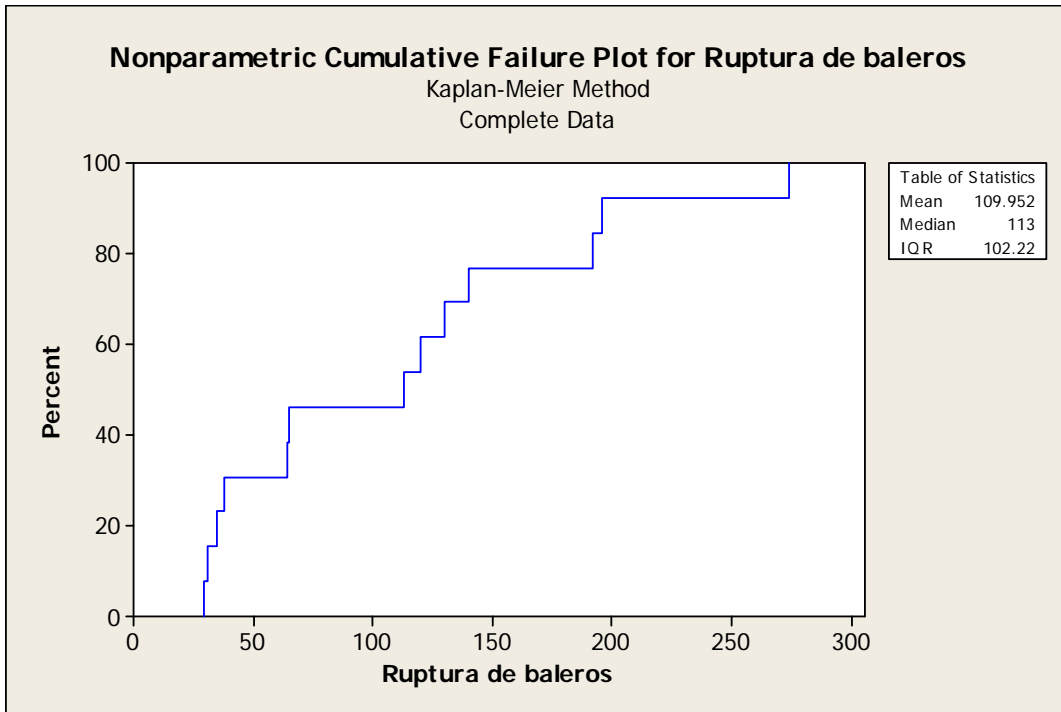


Figura 18 Función de distribución acumulativa Kaplan - Meier para fallas de ruptura de baleros en la máquina de estampado.

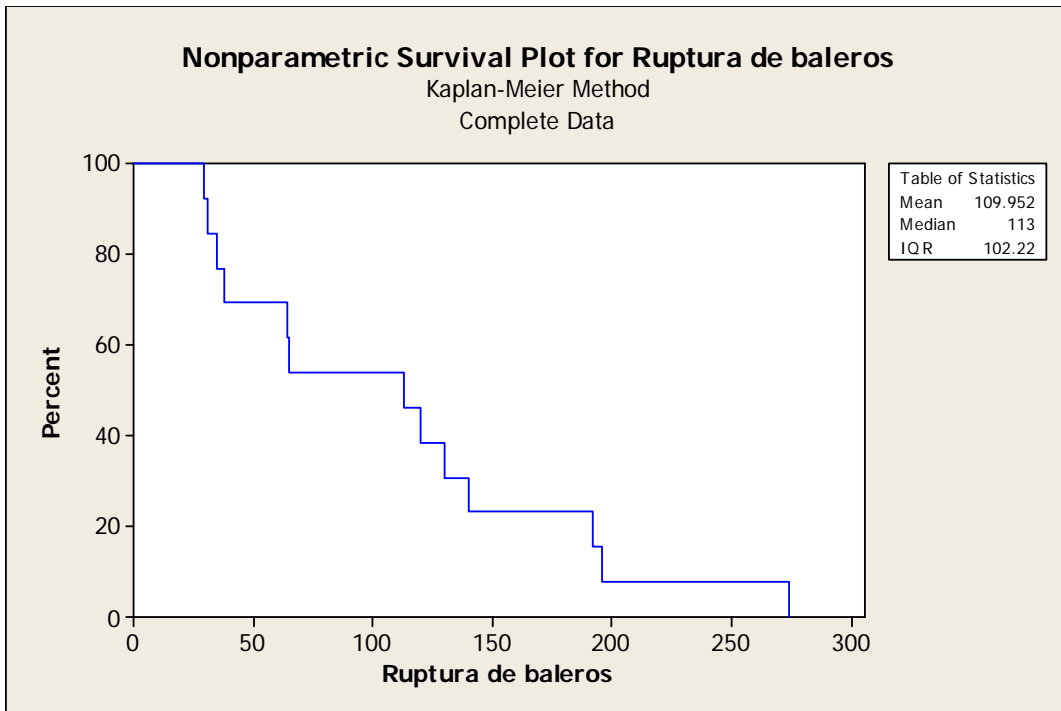


Figura 19 Función de distribución Kaplan - Meier para fallas de ruptura de baleros en la máquina de estampado.

Kaplan-Meier Estimates

Time	Number		Survival Probability	Standard Error	95.0% Normal CI	
	at Risk	Number Failed			Lower	Upper
29.22	13	1	0.923077	0.073905	0.778225	1.000000
31.37	12	1	0.846154	0.100068	0.650024	1.000000
35.16	11	1	0.769231	0.116855	0.540200	0.99826
38.02	10	1	0.692308	0.128008	0.441417	0.94320
64.00	9	1	0.615385	0.134932	0.350923	0.87985
65.25	8	1	0.538462	0.138264	0.267469	0.80945
113.00	7	1	0.461538	0.138264	0.190546	0.73253
120.25	6	1	0.384615	0.134932	0.120154	0.64908
130.13	5	1	0.307692	0.128008	0.056802	0.55858
140.24	4	1	0.230769	0.116855	0.001739	0.45980
192.38	3	1	0.153846	0.100068	0.000000	0.34998
196.15	2	1	0.076923	0.073905	0.000000	0.22177
274.20	1	1	0.000000	0.000000	0.000000	0.00000