LAMPIRAN

LAMPIRAN 1

Gambar Gudang Bahan Baku Beton Pracetak

Proses Pengecoran

LAMPIRAN 2

Gudang Produk Jadi Beton Pracetak Tiang Pancang

Gambar Uditch yang sudah di Cor

LAMPIRAN 3

Gambar Gudang Produk Jadi Uditch

Cover Uditch

LAMPIRAN 4

Pengukuran Waktu Kerja Produk Tiang Pancang

Pengukuran Waktu Kerja (Detik)					
	Elemen Kerja	x		x^2	
Operator 2	Pemotongan	12	13	144	169
		11	10	121	100
		12	12	144	144
		11	10	121	100
		10	12	100	144
		12	10	144	100
		11	11	121	121
		11	12	100	144
		13	11	169	121
		12	12	144	144
		12	10	144	100
		11	12	121	144
		11	11	121	121
		11	13	121	169
		12	12	144	144
$\sum x$					342
$\sum x^2$					3945
$(\sum x)^2$					1179649
$\bar{x}$					11,4

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 3	Penekukan	1,06	1,01	1,137778	1,033612
		1,03	1,08	1,067777	1,17361
		1,03	1,1	1,067777	1,21
		1,01	1,01	1,033612	1,033612
		1,05	1,05	1,1025	1,1025
		1,06	1,05	1,137778	1,1025
		1,03	1,05	1,067777	1,1025
		1,01	1,01	1,033612	1,033612
		1,06	1,06	1,137778	1,137778
		1,01	1,01	1,033612	1,033612
		1,05	1,08	1,1025	1,17361
		1,03	1,1	1,067777	1,21
		1,08	1,08	1,17361	1,17361
		1,08	1,06	1,17361	1,137778
		1,1	1,1	1,21	1,21
$\sum x$					31,65
$\sum x^2$					33,41584
$(\sum x)^2$					1001,723
$\bar{x}$					1,055

LAMPIRAN 5

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 4	Las Potong	2	2,1	4	4,41
		1,83	2,06	3,36111	4,271112
		2,11	1,98	4,480279	3,93361
		2,13	1,98	4,55111	3,93361
		2,01	2	4,066946	4
		1,95	1,98	3,8025	3,93361
		2,1	2,13	4,41	4,55111
		2	1,95	4	3,8025
		2,01	2,1	4,066946	4,41
		1,83	1,95	3,36111	3,8025
		1,83	1,9	3,36111	3,61
		2,05	2,08	4,2025	4,340276
		2	1,9	4	3,61
		1,86	1,95	3,484446	3,8025
		2,03	2,08	4,134443	4,340276
$\sum x$					59.95
$\sum x^2$					120,034
$(\sum x)^2$					3594
$\bar{x}$					1,9983

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 5	Pengeboran	1,48	1,45	2,200277	2,1025
		1,38	1,41	1,91361	2,006945
		1,41	1,33	2,006945	1,777777
		1,36	1,38	1,867779	1,91361
		1,48	1,43	2,200277	2,054443
		1,36	1,4	1,867779	1,96
		1,43	1,36	2,054443	1,867779
		1,45	1,38	2,1025	1,91361
		1,35	1,36	1,8225	1,867779
		1,48	1,35	2,200277	1,8225
		1,45	1,46	2,1025	2,151112
		1,38	1,43	1,91361	2,054443
		1,46	1,33	2,151112	1,777777
		1,36	1,46	1,867779	2,151112
		1,41	1,48	2,006945	2,200277
$\sum x$					42,3667
$\sum x^2$					59,9
$(\sum x)^2$					1794,93
$\bar{x}$					1,4122

LAMPIRAN 6

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 6	Pengelasan	1,43	1,38	2,054443	1,91361
		1,41	1,41	2,006945	2,006945
		1,41	1,41	2,006945	2,006945
		1,4	1,38	1,96	1,91361
		1,4	1,43	1,96	2,054443
		1,4	1,43	1,96	2,054443
		1,43	1,43	2,054443	2,054443
		1,38	1,38	1,91361	1,91361
		1,433	1,38	2,054443	1,91361
		1,41	1,38	2,006945	1,91361
		1,41	1,4	2,006945	1,96
		1,4	1,38	1,96	1,91361
		1,38	1,4	1,91361	1,96
		1,4	1,4	1,96	1,96
		1,4	1,41	1,96	2,006945
$\sum x$					42,183
$\sum x^2$					59,3242
$(\sum x)^2$					1779,43
$\bar{x}$					1,40611

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 7	Menekuk Besi Spiral Kotak	1,16	1,16	1,361112	1,361112
		1,15	1,16	1,3225	1,361112
		1,16	1,18	1,361112	1,400277
		1,15	1,15	1,3225	1,3225
		1,16	1,18	1,361112	1,400277
		1,18	1,15	1,400277	1,3225
		1,18	1,16	1,400277	1,361112
		1,18	1,16	1,400277	1,361112
		1,16	1,15	1,361112	1,3225
		1,15	1,16	1,3225	1,361112
		1,18	1,18	1,400277	1,400277
		1,15	1,15	1,3225	1,3225
		1,18	1,18	1,400277	1,400277
		1,15	1,15	1,3225	1,3225
		1,18	1,18	1,400277	1,400277
$\sum x$					35,0167
$\sum x^2$					40,878
$(\sum x)^2$					1226,17
$\bar{x}$					1,16722

LAMPIRAN 7

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 8	Menggiling Besi Spiral Bundar	1,03	1,03	1,067777	1,067777
		1	1,05	1	1,1025
		1,03	1,03	1,067777	1,067777
		1,01	1	1,033612	1
		1,05	1	1,1025	1
		1,05	1,03	1,1025	1,067777
		1,05	1,03	1,1025	1,067777
		1	1	1	1
		1,03	1,016	1,067777	1,033612
		1,03	1,05	1,067777	1,1025
		1,05	1,03	1,1025	1,067777
		1,016	1,016	1,033612	1,033612
		1,03	1,03	1,067777	1,067777
		1,05	1,03	1,1025	1,067777
		1,03	1,03	1,067777	1,067777
$\sum x$					30,8833
$\sum x^2$					31,8008
$(\sum x)^2$					953,78
$\bar{x}$					1,02944

Pengukuran Waktu Kerja (Detik)					
	Elemen Kerja	x		x^2	
Operator 9	Penarikan Strain	42	43	1764	1849
		43	40	1849	1600
		43	43	1849	1849
		41	42	1681	1764
		45	44	2025	1936
		42	42	1764	1764
		43	41	1849	1681
		41	40	1681	1600
		40	40	1600	1600
		43	41	1849	1681
		42	40	1764	1600
		45	43	2025	1849
		45	42	2025	1764
		45	44	2025	1936
		43	45	1849	2025
$\sum x$					1273
$\sum x^2$					54097
$(\sum x)^2$					1620529
$\bar{x}$					42,4333

LAMPIRAN 8

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 10	Pencetakan	5,16	5,1	26,69445	26,01
		5,15	5,13	26,5225	26,35111
		5,15	5,11	26,5225	26,18028
		5,13	5,16	26,35111	26,69445
		5,08	5,15	25,84027	26,5225
		5,13	5,08	26,35111	25,84027
		5,1	5,13	26,01	26,35111
		5,11	5,08	26,18028	25,84027
		5,08	5,13	25,84027	26,35111
		5,13	5,1	26,35111	26,01
		5,1	5,1	26,01	26,01
		5,133	5,11	26,35111	26,18028
		5,11	5,16	26,18028	26,69445
		5,15	5,16	26,5225	26,69445
		5,11	5,16	26,18028	26,69445
$\sum x$					153,783
$\sum x^2$					788,332
$(\sum x)^2$					23649,3
$\bar{x}$					5,12611

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 11	Pengecoran	16,01	16,03	256,3201	256,9609
		16,03	16,02	256,9609	256,6404
		16,04	16,05	257,2816	257,6025
		16,05	16,04	257,6025	257,2816
		16,03	16,03	256,9609	256,9609
		16,04	16,04	257,2816	257,2816
		16,01	16,03	256,3201	256,9609
		16,02	16,02	256,6404	256,6404
		16,02	16,02	256,6404	256,6404
		16,02	16,01	256,6404	256,3201
		16,03	16,05	256,9609	257,6025
		16,02	16,05	256,6404	257,6025
		16,03	16,01	256,9609	256,3201
		16,05	16,03	257,6025	256,9609
		16,01	16,04	256,3201	257,2816
$\sum x$					480,88
$\sum x^2$					7708,19
$(\sum x)^2$					231246
$\bar{x}$					16,02

LAMPIRAN 9

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 12	Meratakan Semen Cor	8,03	8,07	64,4809	65,1249
		8,05	8,07	64,8025	65,1249
		8,06	8,03	64,9636	64,4809
		8,07	8,06	65,1249	64,9636
		8,05	8,05	64,8025	64,8025
		8,03	8,04	64,4809	64,6416
		8,04	8,03	64,6416	64,4809
		8,05	8,03	64,8025	64,4809
		8,07	8,04	65,1249	64,6416
		8,06	8,04	64,9636	64,6416
		8,03	8,06	64,4809	64,9636
		8,03	8,05	64,4809	64,8025
		8,04	8,05	64,6416	64,8025
		8,04	8,07	64,6416	65,1249
		8,05	8,06	64,8025	64,9636
$\sum x$					241,45
$\sum x^2$					1943,28
$(\sum x)^2$					58298,1
$\bar{x}$					8,04

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 13	Pengambilan Produk Jadi	3,06	3,08	9,3636	9,4864
		3,05	3,09	9,3025	9,5481
		3,09	3,1	9,5481	9,61
		3,08	3,1	9,4864	9,61
		3,1	3,06	9,61	9,3636
		3,07	3,09	9,4249	9,5481
		3,05	3,08	9,3025	9,4864
		3,09	3,06	9,5481	9,3636
		3,1	3,07	9,61	9,4249
		3,07	3,08	9,4249	9,4864
		3,05	3,09	9,3025	9,5481
		3,06	3,1	9,3636	9,61
		3,1	3,06	9,61	9,3636
		3,08	3,05	9,4864	9,3025
		3,07	3,05	9,4249	9,3025
$\sum x$					92,28
$\sum x^2$					283,863
$(\sum x)^2$					8515,6
$\bar{x}$					3,07

LAMPIRAN 10

Pengukuran Waktu Kerja Produk U-Ditch

Pengukuran Waktu Kerja (Detik)					
	Elemen Kerja	x		x^2	
Operator 1	Pemotongan	13	13	169	169
		13	13	169	169
		14	14	196	196
		13	13	169	169
		14	14	196	196
		14	14	196	196
		14	14	196	196
		12	12	144	144
		14	14	196	196
		15	15	225	225
		12	12	144	144
		15	15	225	225
		15	15	225	225
		12	12	144	144
		15	15	225	225
$\sum x$					410
$\sum x^2$					5638
$(\sum x)^2$					168100
$\bar{x}$					13,66

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 2	Penekukan	1,11	1,11	1,2321	1,2321
		1,15	1,15	1,3225	1,3225
		1,1	1,1	1,21	1,21
		1,1	1,1	1,21	1,21
		1,133	1,13	1,283689	1,2769
		1,15	1,15	1,3225	1,3225
		1,11	1,11	1,2321	1,2321
		1,11	1,11	1,2321	1,2321
		1,133	1,13	1,283689	1,2769
		1,1	1,1	1,21	1,21
		1,15	1,15	1,3225	1,3225
		1,15	1,15	1,3225	1,3225
		1,11	1,11	1,2321	1,2321
		1,1	1,1	1,21	1,21
		1,133	1,133	1,283689	1,283689
$\sum x$					33,672
$\sum x^2$					37,8054
$(\sum x)^2$					1133,8
$\bar{x}$					1,12

LAMPIRAN 11

Pengukuran Waktu Kerja (Menit)					
Operator 3	Elemen Kerja	x		x^2	
	Merakit	3,01	3,05	9,02	9,3025
		3,05	3,03	9,3025	9,201111
		3,03	3,01	9,201111	9,02
		3,05	3,08	9,3025	9,506944
		3,08	3,01	9,506944	9,100278
		3,05	3,01	9,3025	9,02
		3,03	3,03	9,201111	9,201111
		3,01	3,03	9,02	9,201111
		3,06	3,03	9,404444	9,201111
		3,08	3,05	9,506944	9,3025
		3,05	3,05	9,3025	9,3025
		3,08	3,06	9,506944	9,404444
		3,03	3,08	9,201111	9,506944
		3,08	3,01	9,506944	9,100278
		3,05	3,03	9,3025	9,201111
$\sum x$					91,3733
$\sum x^2$					278,32
$(\sum x)^2$					8349,09
$\bar{x}$					3,04578

Pengukuran Waktu Kerja (Menit)					
Operator 4	Elemen Kerja	x		x^2	
	Pemasangan Molding	23	23	529	529
		25	25	625	625
		23	24	529	576
		21	25	441	625
		24	23	576	529
		25	21	625	441
		24	23	576	529
		24	25	576	625
		21	24	441	576
		21	21	441	441
		21	25	441	625
		24	24	576	576
		25	25	625	625
		24	23	576	529
		23	21	529	441
$\sum x$					700
$\sum x^2$					16398
$(\sum x)^2$					490000
$\bar{x}$					23,333

LAMPIRAN 12

Pengukuran Waktu Kerja (menit)					
	Elemen Kerja	x		x^2	
Operator 5	Pengecoran	15,15	15,1	229,5225	228,01
		15,16	15,1	230,0279	228,01
		15,08	15,15	227,5068	229,5225
		15,13	15,16	229,0177	230,0279
		15,15	15,11	229,5225	228,5137
		15,13	15,1	229,0177	228,01
		15,11	15,08	228,5137	227,5068
		15,15	15,13	229,5225	229,0177
		15,15	15,15	229,5225	229,5225
		15,16	15,13	230,0279	229,0177
		15,08	15,08	227,5068	227,5068
		15,13	15,1	229,0177	228,01
		15,15	15,08	229,5225	227,5068
		15,08	15,16	227,5068	230,0279
		15,1	15,13	228,01	229,0177
$\sum x$					453,75
$\sum x^2$					6862,99
$(\sum x)^2$					205889
$\bar{x}$					15,125

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 6	Meratakan Semen Cor	4,06	4,08	16,4836	16,6464
		4,05	4,09	16,4025	16,7281
		4,09	4,1	16,7281	16,81
		4,08	4,1	16,6464	16,81
		4,1	4,06	16,81	16,4836
		4,07	4,09	16,5649	16,7281
		4,05	4,08	16,4025	16,6464
		4,09	4,06	16,7281	16,4836
		4,1	4,07	16,81	16,5649
		4,07	4,08	16,5649	16,6464
		4,05	4,09	16,4025	16,7281
		4,06	4,1	16,4836	16,81
		4,1	4,06	16,81	16,4836
		4,08	4,05	16,6464	16,4025
		4,07	4,05	16,5649	16,4025
$\sum x$					122,28
$\sum x^2$					498,423
$(\sum x)^2$					14952,4
$\bar{x}$					4,076

LAMPIRAN 13

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 7	Pengambilan Produk Jadi	1,5	1,4	2,25	1,96
		1,4	1,3	1,96	1,69
		1,3	1,2	1,69	1,44
		1,2	1,2	1,44	1,44
		1,3	1,2	1,69	1,44
		1,2	1,1	1,44	1,21
		1,1	1,2	1,21	1,44
		1,5	1,2	2,25	1,44
		1,5	1,3	2,25	1,69
		1,4	1,4	1,96	1,96
		1,1	1,3	1,21	1,69
		1,1	1,5	1,21	2,25
		1,2	1,3	1,44	1,69
		1,3	1,4	1,69	1,96
		1,4	1,5	1,96	2,25
$\sum x$					39
$\sum x^2$					51,2
$(\sum x)^2$					1521
$\bar{x}$					1,3

Pengukuran Waktu Kerja Cover U-Ditch

Pengukuran Waktu Kerja (Detik)					
	Elemen Kerja	x		x^2	
Operator 1	Pemotongan	11	10	121	100
		10	11	100	121
		11	12	121	144
		12	12	144	144
		11	11	121	121
		10	10	100	100
		11	11	121	121
		10	10	100	100
		11	11	121	121
		12	11	144	121
		11	12	121	144
		10	12	100	144
		11	10	121	100
		12	11	144	121
		10	12	100	144
$\sum x$					329
$\sum x^2$					3625
$(\sum x)^2$					108241
$\bar{x}$					10,96

LAMPIRAN 14

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 2	Merakit	2,5	2,6	6,25	6,76
		2,6	2,8	6,76	7,84
		2,7	2,7	7,29	7,29
		2,5	2,5	6,25	6,25
		2,6	2,6	6,76	6,76
		2,7	2,7	7,29	7,29
		2,8	2,6	7,84	6,76
		2,5	2,7	6,25	7,29
		2,6	2,6	6,76	6,76
		2,5	2,5	6,25	6,25
		2,6	2,5	6,76	6,25
		2,7	2,6	7,29	6,76
		2,7	2,5	7,29	6,25
		2,5	2,7	6,25	7,29
		2,5	2,6	6,25	6,76
$\sum x$					78,2
$\sum x^2$					204,1
$(\sum x)^2$					6115,24
$\bar{x}$					2,60

Pengukuran Waktu Kerja (Detik)					
	Elemen Kerja	x		x^2	
Operator 3	Pemasangan Molding	21	23	441	529
		22	22	484	484
		23	24	529	576
		21	23	441	529
		22	21	484	441
		23	22	529	484
		24	24	576	576
		24	23	576	529
		24	22	576	484
		21	21	441	441
		22	24	484	576
		23	23	529	529
		24	22	576	484
		21	24	441	576
		22	23	484	529
$\sum x$					678
$\sum x^2$					15358
$(\sum x)^2$					459684
$\bar{x}$					22,6

LAMPIRAN 15

Pengukuran Waktu Kerja (menit)					
	Elemen Kerja	x		x^2	
Operator 4	Pengecoran	13,05	13,1	170,3025	171,61
		13,06	13,07	170,5636	170,8249
		13,05	13,06	170,3025	170,5636
		13,08	13,06	171,0864	170,5636
		13,09	13,06	171,3481	170,5636
		13,05	13,06	170,3025	170,5636
		13,1	13,05	171,61	170,3025
		13,08	13,05	171,0864	170,3025
		13,1	13,05	171,61	170,3025
		13,1	13,06	171,61	170,5636
		13,07	13,05	170,8249	170,3025
		13,05	13,08	170,3025	171,0864
		13,09	13,05	171,3481	170,3025
		13,1	13,1	171,61	171,61
		13,07	13,06	170,8249	170,5636
$\sum x$					392,1
$\sum x^2$					5124,76
$(\sum x)^2$					153742
$\bar{x}$					13,07

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 5	Meratakan Semen Cor	4,15	4,13	17,2225	17,0569
		4,1	4,12	16,81	16,9744
		4,16	4,13	17,3056	17,0569
		4,16	4,14	17,3056	17,1396
		4,1	4,16	16,81	17,3056
		4,12	4,16	16,9744	17,3056
		4,12	4,16	16,9744	17,3056
		4,14	4,15	17,1396	17,2225
		4,13	4,15	17,0569	17,2225
		4,13	4,14	17,0569	17,1396
		4,12	4,12	16,9744	16,9744
		4,1	4,13	16,81	17,0569
		4,16	4,12	17,3056	16,9744
		4,15	4,13	17,2225	17,0569
		4,16	4,1	17,3056	16,81
$\sum x$					124,04
$\sum x^2$					512,87
$(\sum x)^2$					15385
$\bar{x}$					4,13

LAMPIRAN 16

Pengukuran Waktu Kerja (Menit)					
	Elemen Kerja	x		x^2	
Operator 6	Pengambilan Produk Jadi	1,3	1,5	1,69	2,25
		1,2	1,4	1,44	1,96
		1,2	1,3	1,44	1,69
		1,1	1,2	1,21	1,44
		1,4	1,5	1,96	2,25
		1,3	1,4	1,69	1,96
		1,2	1,3	1,44	1,69
		1,3	1,3	1,69	1,69
		1,5	1,1	2,25	1,21
		1,5	1,1	2,25	1,21
		1,5	1,3	2,25	1,69
		1,5	1,4	2,25	1,96
		1,3	1,5	1,69	2,25
		1,2	1,2	1,44	1,44
		1,5	1,1	2,25	1,21
$\sum x$					39,6
$\sum x^2$					5,84
$(\sum x)^2$					1568,16
$\bar{x}$					1,32

LAMPIRAN 17

Uji Kecukupan Data Produk Tiang Pancang

Operator 2

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(3945-(11,79649)}}{343}\right]^2$$

$N' < N$ = 9,533 < 30 Data Cukup

Operator 3

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(33,4158-(1001,72)}}{31,65}\right]^2$$

$N' < N$ = 1,201 < 30 Data Cukup

Operator 4

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(120,034-(3594)}}{59,95}\right]^2$$

$N' < N$ = 3,11 < 30 Data Cukup

Operator 5

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(59,9-(1749,93)}}{42,36}\right]^2$$

$N' < N$ = 1,841 < 30 Data Cukup

Operator 6

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(59,3242-(1779.43)}}{42,183}\right]^2$$

$N' < N$ = 0,262 < 30 Data Cukup

Operator 7

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(40,8781-(1226,17)}}{35,0161}\right]^2$$

$N' < N$ = 0,227 < 30 Data Cukup

Operator 8

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(31,8008-(953,78)}}{30,883}\right]^2$$

$N' < N$ = 0,41053 < 30 Data Cukup

Operator 9

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(54097-(1620529)}}{1273}\right]^2$$

$N' < N$ = 2,3508 < 30 Data Cukup

Operator 10

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(788,332-(23649,3)}}{153,783}\right]^2$$

$N' < N$ = 0,044 < 30 Data Cukup

Operator 11

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(7708,19-(231246)}}{480,88}\right]^2$$

$N' < N$ = 0,00108 < 30 Data Cukup

Operator 12

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(1943,28-(58298,1}}{241,45}\right]^2$$

$N' < N$ = 0,00479 < 30 Data Cukup

Operator 13

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(283m836-(8515,6}}{92,28}\right]^2$$

$N' < N$ = 0,05253 < 30 Data Cukup

Uji Kecukupan Data Prroduk U-Ditch

Operator 1

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(56318-(168100)}}{410}\right]^2$$

$N' < N$ = 9,89 < 30 Data Cukup

Operator 2

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(37,8054)-1133,8}}{33,672}\right]^2$$

$N' < N$ = 0,503 < 30 Data Cukup

Operator 3

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(278,32-(8349,09)}}{91,37}\right]^2$$

$N' < N$ = 0,100 < 30 Data Cukup

Operator 7

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(51,2-(1521)}}{39}\right]^2$$

$N' < N$ = 15,77 < 30 Data Cukup

Operator 4

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(16398-490000}}{700}\right]^2$$

$N' < N$ = 6,33 < 30 Data Cukup

Operator 5

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(6862,99-(205889)}}{453,75}\right]^2$$

$N' < N$ = 0,00593 < 30 Data Cukup

Operator 6

$$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(498,42-(14952,4)}}{122,28}\right]^2$$

$N' < N$ = 0,0299 < 30 Data Cukup

LAMPIRAN 18

Uji Kecukupan Data Produk Cover-Uditch

Operator 1

$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(3625-(108241)}}{329}\right]^2$

$N' < N$ = 7,52 < 30 Data Cukup

Operator 2

$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(204,1-(6115,24)}}{78,2}\right]^2$

$N' < N$ = 2,03 < 30 Data Cukup

Operator 3

$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(15358-(459684)}}{678}\right]^2$

$N' < N$ = 3,67 < 30 Data Cukup

Operator 4

$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(5124,76-(153742)}}{392,1}\right]^2$

$N' < N$ = 0,00337 < 30 Data Cukup

Operator 5

$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(512,876-(15385,9)}}{124,04}\right]^2$

$N' < N$ = 0,0366 < 30 Data Cukup

Operator 6

$N' = \left[\frac{^2/_{0,05}\sqrt{30\,(52,84-(1568,16)}}{39,6}\right]^2$

$N' < N$ = 17,386 < 30 Data Cukup

Uji Keseragaman Data Produk Tiang Pancang

Operator 2

$\sigma = \frac{1}{30}\sqrt{30(3945-(11,79649)}$

σ = 0,88255

Batas Kontrol

BKA = 11,433 + (2 x 0,88255) = 13,1984

BKB = 11,433 – (2 x 0,88255) = 9,66824

Operator 3

$\sigma = \frac{1}{30}\sqrt{30(33,4158-(1001,72)}$

σ = 0,02892

Batas Kontrol

BKA = 1,055+ (2 x 0,02508) = 1,11283

BKB = 1,055– (2 x 0,02508) = 0,99717

Operator 4

$\sigma = \frac{1}{30}\sqrt{30(120,034-(3594)}$

σ = 0,0882

Batas Kontrol

BKA = 1,9983 + (2 x 0,0882) = 2,17479

BKB = 1,9983– (2 x 0,0882) = 1,82188

Operator 5

$\sigma = \frac{1}{30}\sqrt{30(59,9-(1749,93)}$

σ = 0,0479

Batas Kontrol

BKA = 1,41 + (2 x 0,0479) = 1,50804

BKB = 1,41– (2 x 0,0479) = 1,31641

Operator 6

$\sigma = \frac{1}{30}\sqrt{30(59,3242-(1779,43)}$

σ = 0,01799

Batas Kontrol

BKA = 1,40611 + (2 x 0,01799) = 1,4421

BKB = 1,40611– (2 x 0,01799) = 1,37012

Operator 7

$\sigma = \frac{1}{30}\sqrt{30(40,8781-(1226,17)}$

σ = 0,01393

Batas Kontrol

BKA = 1,16722 + (2 x 0,01799) = 1,19509

BKB = 1,16722– (2 x 0,01799) = 1,13936

Operator 8

$\sigma = \frac{1}{30}\sqrt{30(31,8008-(953,78)}$

σ = 0,01649

Batas Kontrol

BKA = 1,02944 + (2 x 0,01649) = 1,06242

BKB = 1,02944– (2 x 0,01649) = 0,99646

Operator 9

$\sigma = \frac{1}{30}\sqrt{30(54097)-1620529}$

σ = 1,62652

Batas Kontrol

BKA = 42,4333 + (2 x 1,62652) = 45,6864

BKB = 42,4333– (2 x 1,62672) = 39,1803

Operator 10

$\sigma = \frac{1}{30}\sqrt{30(788,332)-23649,3}$

σ = 0,02711

Batas Kontrol

BKA = 5,1261+ (2 x 0,02711) = 5,18033

BKB =5,1261– (2 x 0,02711) = 5,07189

Operator 11

$\sigma = \frac{1}{30}\sqrt{30(7708,19)-231246}$

σ = 0,01315

Batas Kontrol

BKA = 16,0293+ (2 x 0,01315) = 16,0556

BKB = 16,0293– (2 x 0,01315) = 16,003

Operator 12

$\sigma = \frac{1}{30}\sqrt{30(241,45)-58298,1}$

σ = 0,01392

Batas Kontrol

BKA = 8,04833+ (2 x 0,01392) = 8,07618

BKB = 8,04833– (2 x 0,01392) =8,02048

Operator 13

$\sigma = \frac{1}{30}\sqrt{30(283,683)-8515,6}$

σ = 0,01763

Batas Kontrol

BKA = 3,076+ (2 x 0,01763) = 3,11125

BKB = 3,076– (2 x 0,01763 = 3,04075

LAMPIRAN 19

Uji Keseragaman Data Produk U-Ditch

Operator 1
$\sigma = \frac{1}{30}\sqrt{30(5638 - (168100)}$
σ = 1,07497
Batas Kontrol
BKA = 13,6667 + (2 x ,1,07497) = 15,8166
BKB = 13,6667 – (2 x 1,07497) = 11,5167

Operator 2
$\sigma = \frac{1}{30}\sqrt{30(37,8054 - (1133,8)}$
σ = 0,01992
Batas Kontrol
BKA = 1,1224+ (2 x 0,01992) = 1,16224
BKB = 1,1224– (2 x 0,01992) = 1,08256

Operator 3
$\sigma = \frac{1}{30}\sqrt{30(278,32 - (8349,09)}$
σ = 0,02417
Batas Kontrol
BKA = 3,045 + (2 x 0,02417) = 3,09413
BKB = 3,045– (2 x 0,02417) = 2,99743

Operator 4
$\sigma = \frac{1}{30}\sqrt{30(16398 - (490000)}$
σ = 1,4681
Batas Kontrol
BKA = 23,33 + (2 x 1,4681) = 26,2697
BKB = 23,33 – (2 x 1,4681) = 20,397

Operator 5
$\sigma = \frac{1}{30}\sqrt{30(6862,99 - (205889)}$
σ = 0,02911
Batas Kontrol
BKA = 15,125 + (2 x 0,02911) = 15,1832
BKB = 15,125 – (2 x 0,02911) = 15,0668

Operator 6
$\sigma = \frac{1}{30}\sqrt{30(498,423 - (14952,4)}$
σ = 0,01763
Batas Kontrol
BKA = 4,076+ (2 x 0,01763) = 4,11125
BKB = 4.076– (2 x 0,01763) = 4,04075

Operator 7
$\sigma = \frac{1}{30}\sqrt{30(51,2 - (1521)}$
σ = 0,1291
Batas Kontrol
BKA = 1,3 + (2 x 0,1291) = 1,5582
BKB = 1,3– (2 x 0,1291) = 1,0418

Uji Keseragaman Data Produk Cover U-Ditch

Operator 1
$\sigma = \frac{1}{30}\sqrt{30(3625 - (108241)}$
σ = 0,75203
Batas Kontrol
BKA = 10,9667 + (2 x 0,75203) = 12,4707
BKB = 10,9667 – (2 x 0,75203) = 9,4626

Operator 2
$\sigma = \frac{1}{30}\sqrt{30(204,1 - (6115,24)}$
σ = 0,09286
Batas Kontrol
BKA = 2,60667+ (2 x 0,09286) = 2,79238
BKB = 2,60667– (2 x 0,09286) = 2,42095

Operator 3
$\sigma = \frac{1}{30}\sqrt{30(15358 - (459684)}$
σ = 1,08321
Batas Kontrol
BKA = 22,6 + (2 x 1,08321) = 24,7664
BKB = 22,6– (2 x 1,08321) = 20,4336

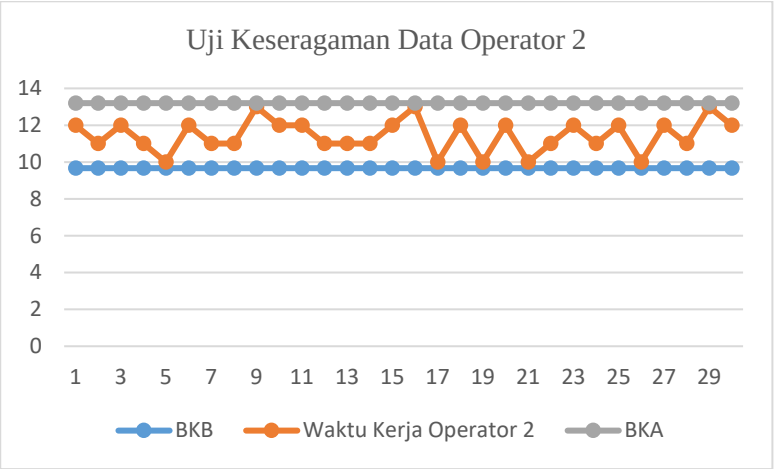
Operator 4
$\sigma = \frac{1}{30}\sqrt{30(5124,76 - (153724)}$
σ = 0,01897
Batas Kontrol
BKA = 13,07 + (2 x 0,01897) = 13,1079
BKB = 13,07 – (2 x 0,01897) = 13,0321

Operator 5
$\sigma = \frac{1}{30}\sqrt{30(512,876 - (15385,9)}$
σ = 0,01979
Batas Kontrol
BKA = 4,134+ (2 x 0,01979) = 4,17424
BKB = 4.134– (2 x 0,01979) = 4,09509

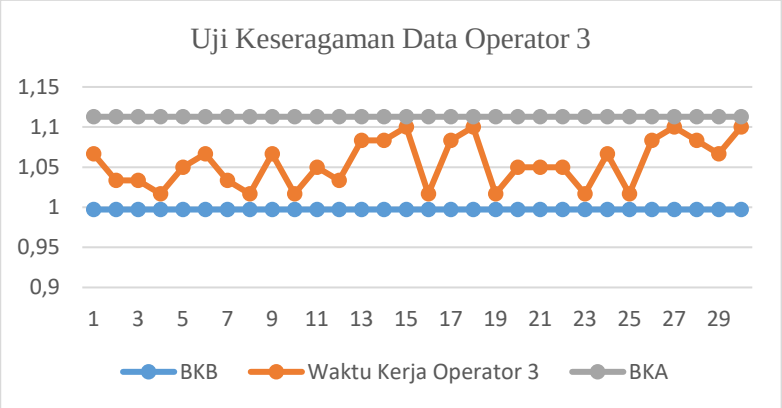
Operator 6
$\sigma = \frac{1}{30}\sqrt{30(52,84 - (1568,16)}$
σ = 0,1376
Batas Kontrol
BKA = 1,32 + (2 x 0,1376) = 1,5952
BKB = 1,32– (2 x 0,1376) = 1,0448

LAMPIRAN 20

Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 2

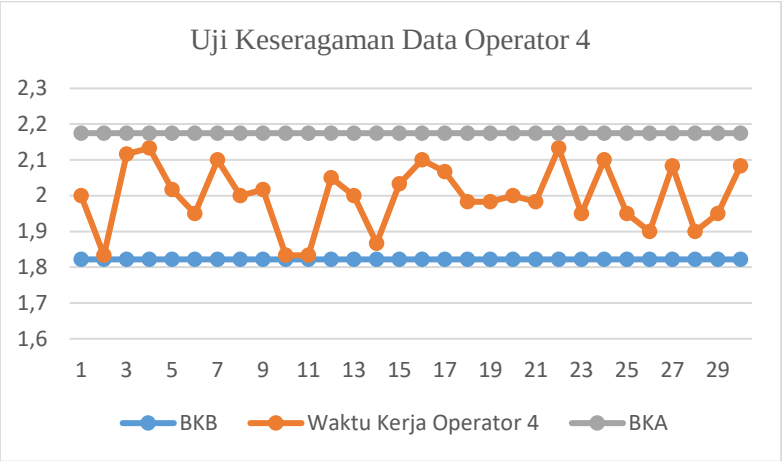


Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 3

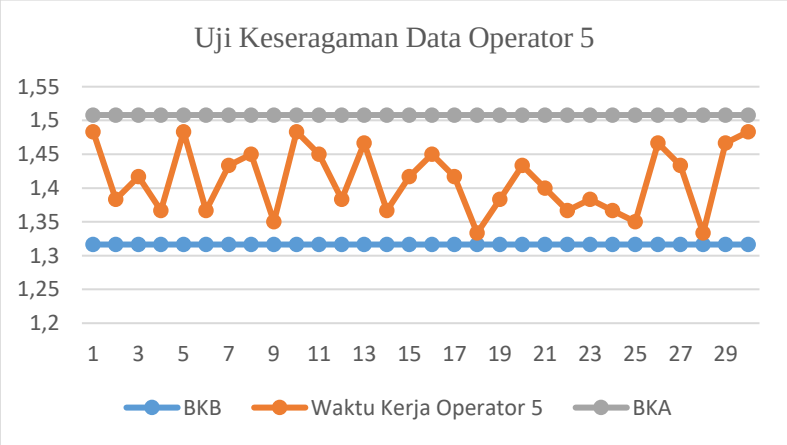


LAMPIRAN 21

Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 4

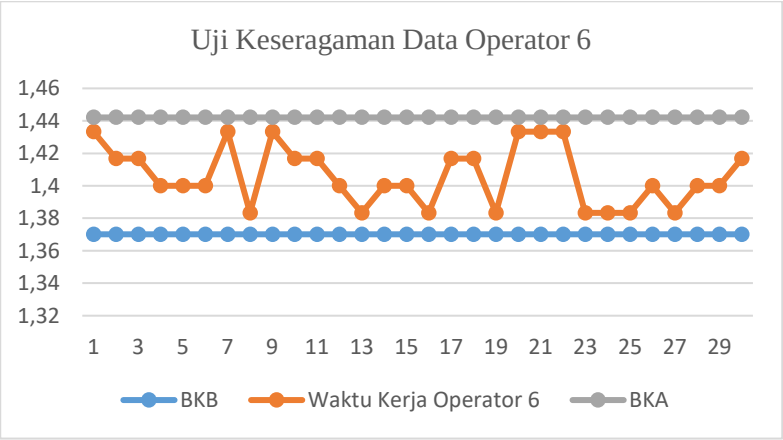


Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 5

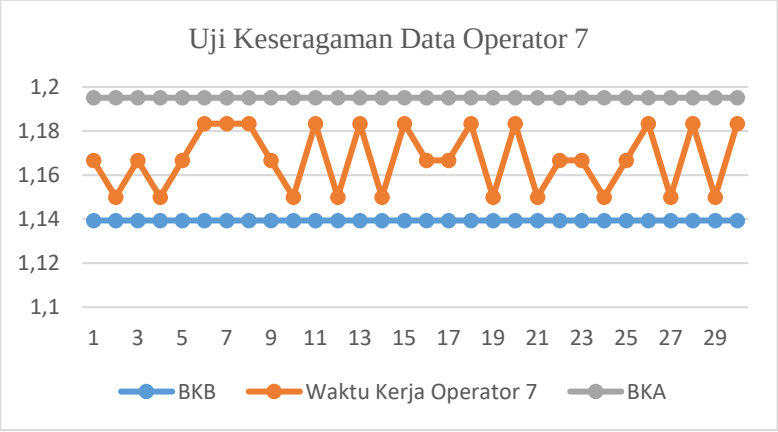


LAMPIRAN 22

Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 6

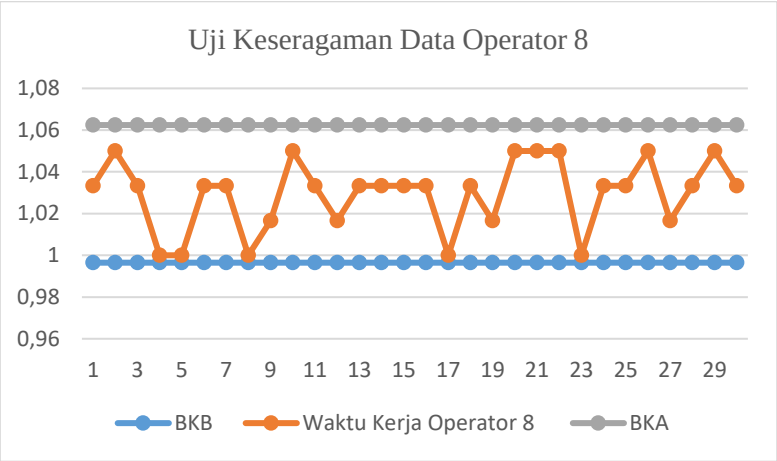


Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 7

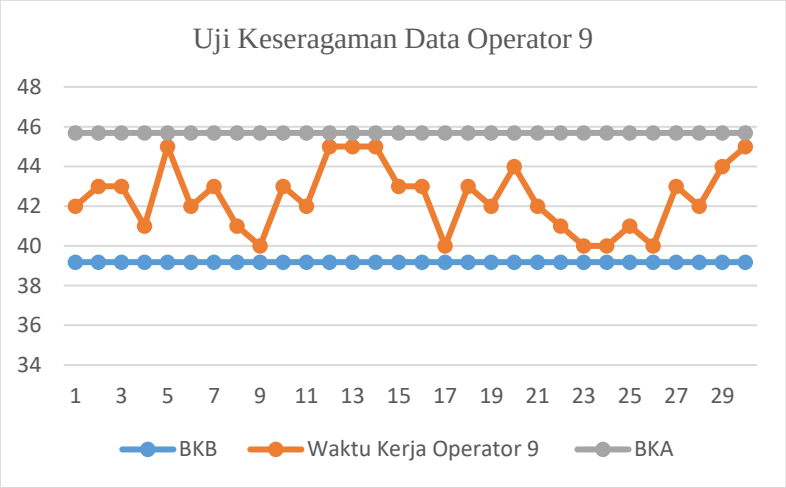


Lampiran 23

Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 8

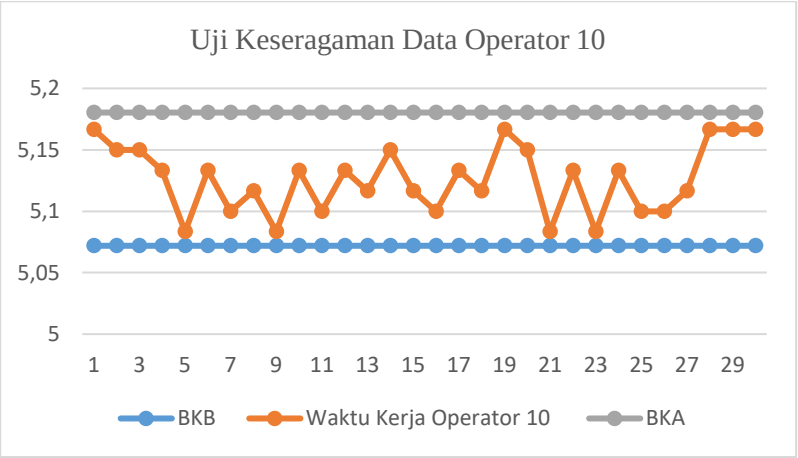


Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 9

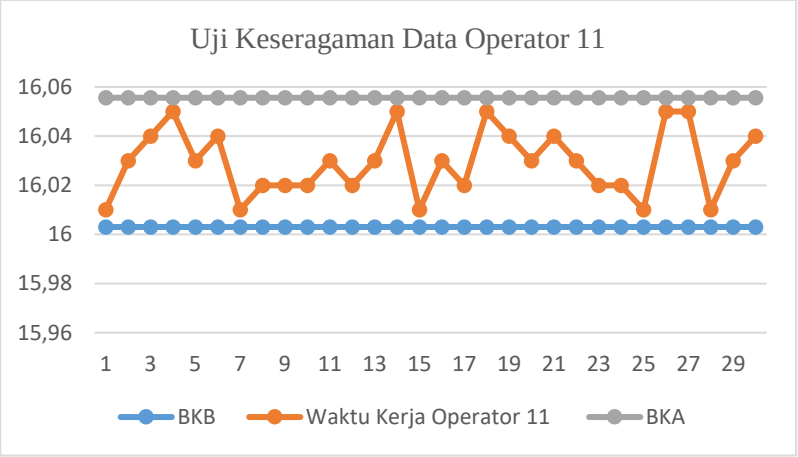


LAMPIRAN 24

Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 10

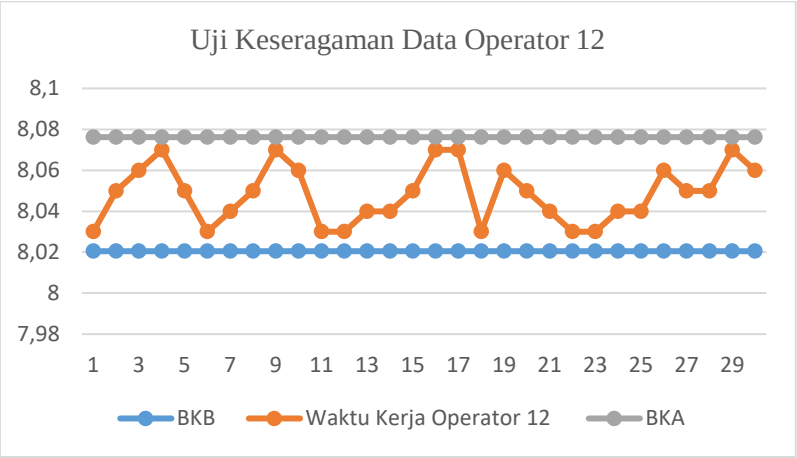


Grafik Uji Keseragaman Data Produk Tiang Pancang Operator 11

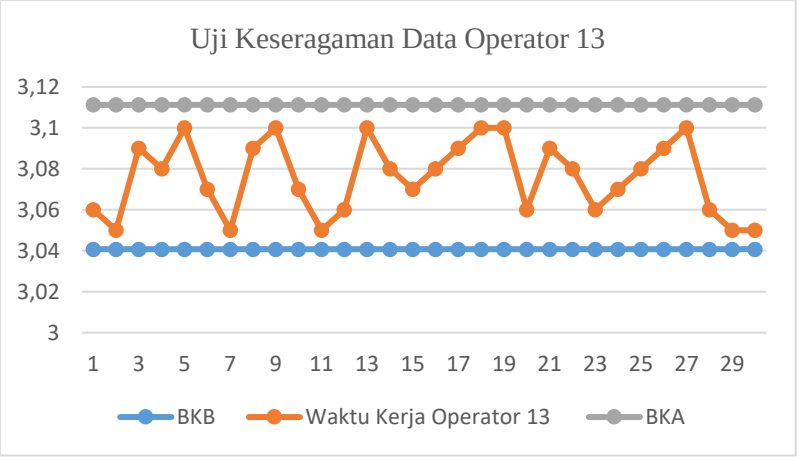


LAMPIRAN 25

Grafik Uji keseragaman Data Produk Tiang Pancanag Operator 12

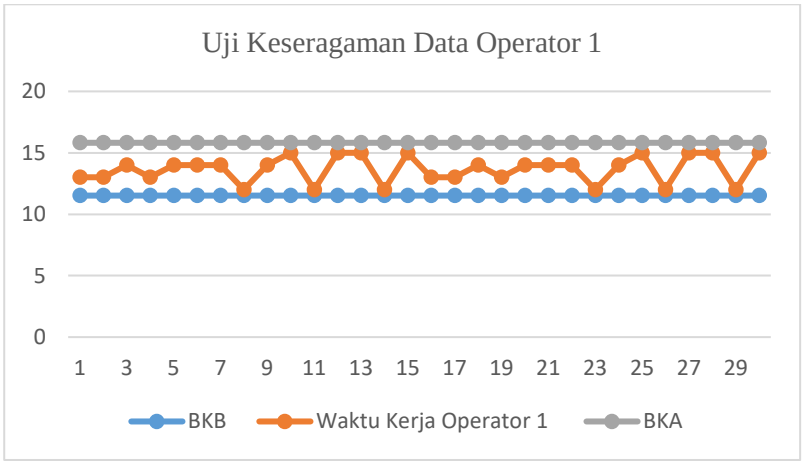


Grafik Uji keseragaman Data Produk Tiang Pancang Operator 13

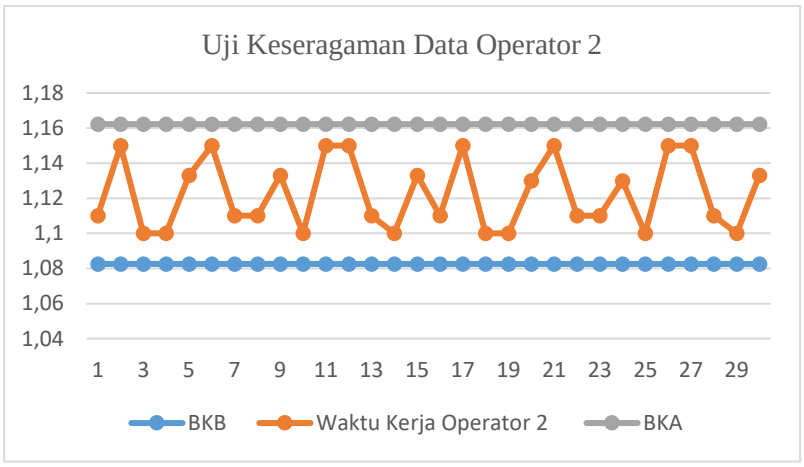


LAMPIRAN 26

Grafik Uji Keseragaman Data Produk U-Ditch Operator 1

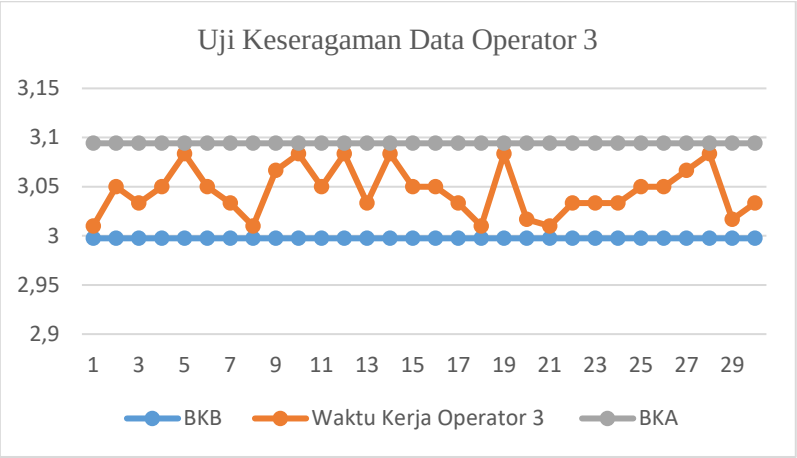


Grafik Uji Keseragaman Data Produk U-Ditch Operator 2

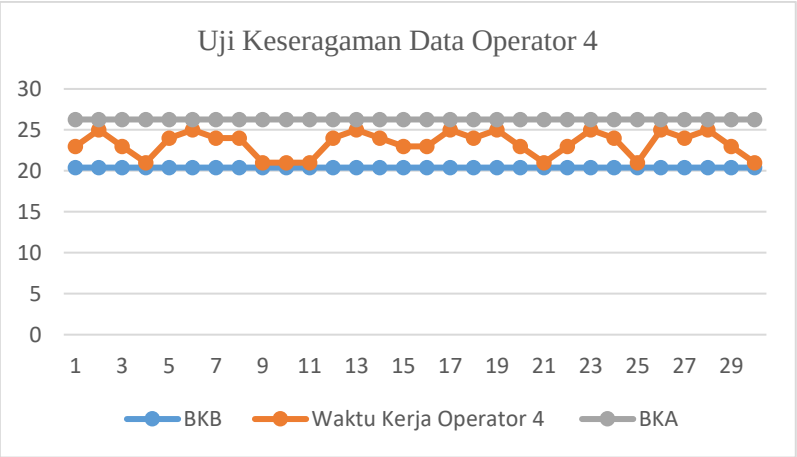


LAMPIRAN 27

Grafik Uji Keseragaman Data Produk U-Ditch Operator 3

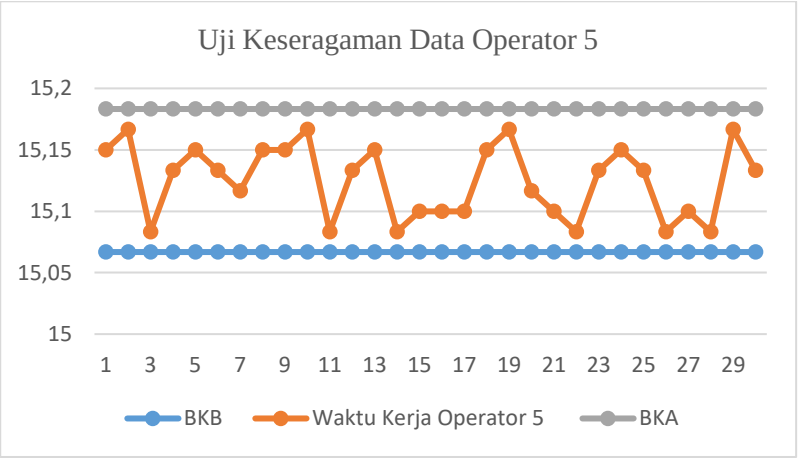


Grafik Uji Keseragaman Data Produk U-Ditch Operator 4

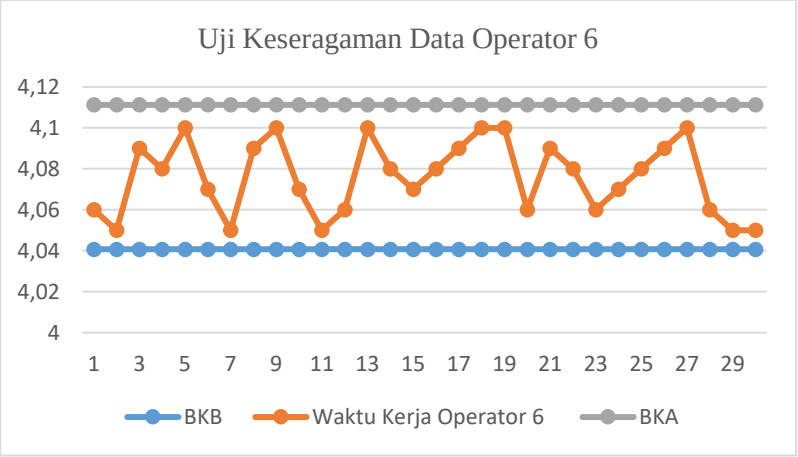


LAMPIRAN 28

Grafik Uji Keseragaman Data Produk U-Ditch Operator 5

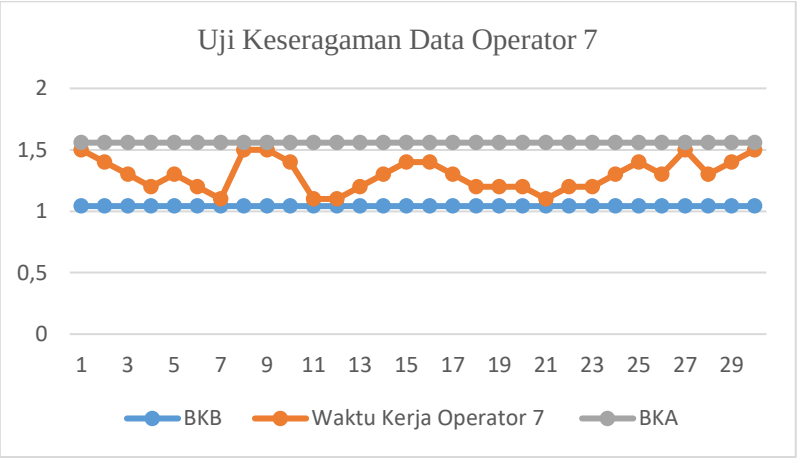


Grafik Uji Keseragaman Data Produk U-Ditch Operator 6

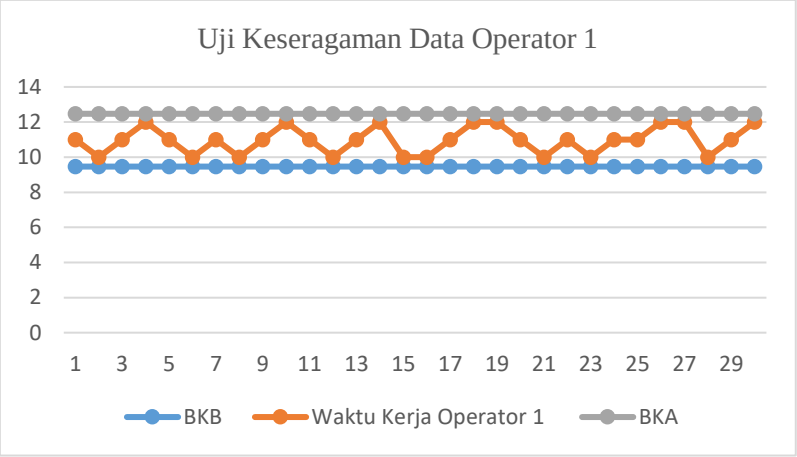


LAMPIRAN 29

Grafik Uji Keseragaman Data Produk U-Ditch Operator 7

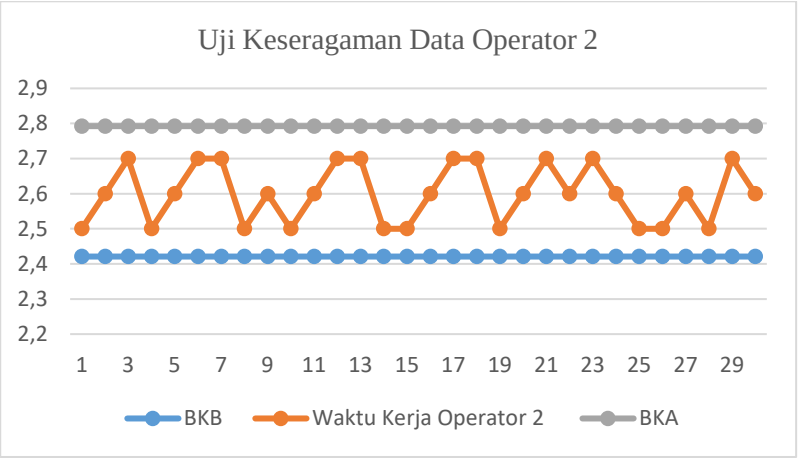


Grafik Uji Keseragaman Data Produk Cover-Uditch Operator 1

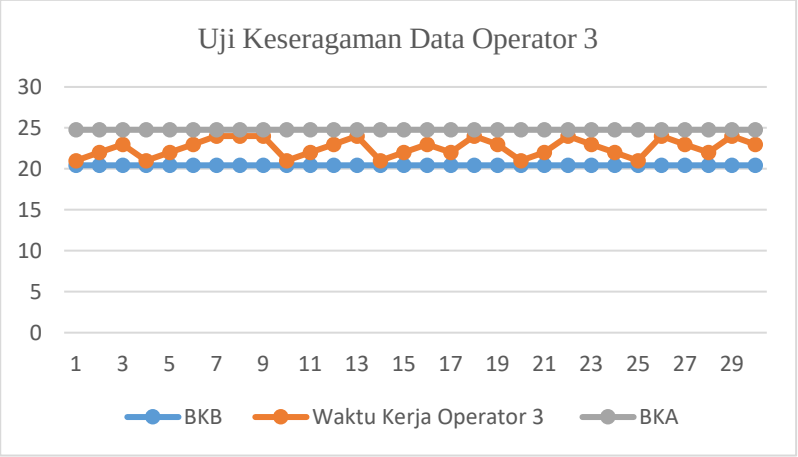


LAMPIRAN 30

Grafik Uji Keseragaman Data Produk Cover U-Ditch Operator 2

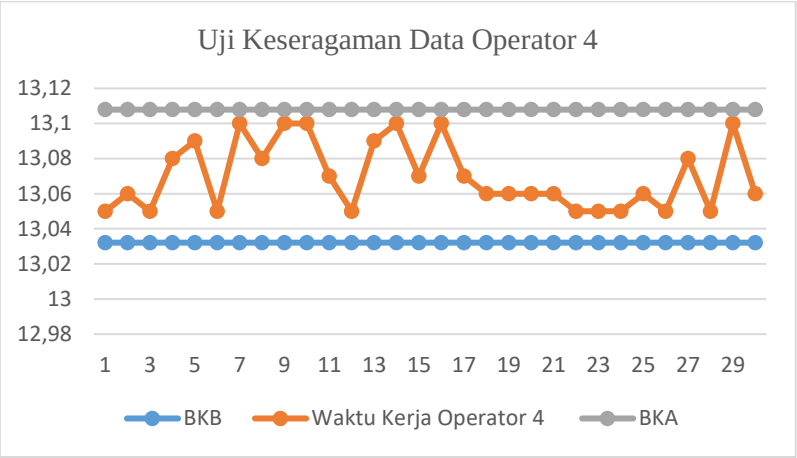


Grafik Uji Keseragaman Data Produk Cover U-Ditch Operator 3

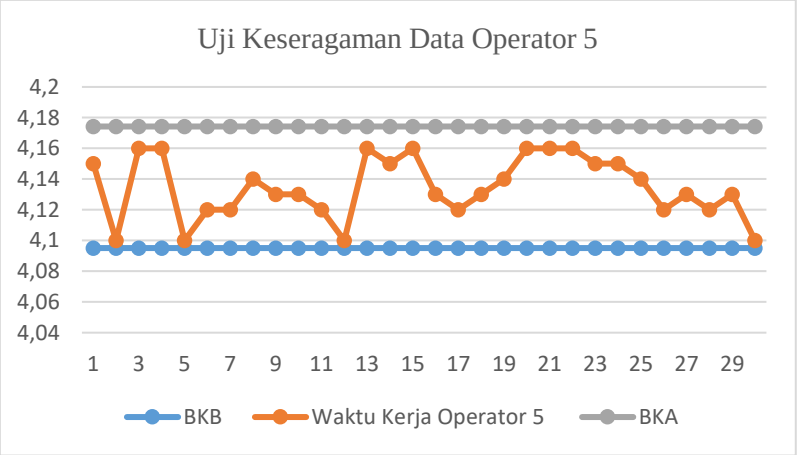


LAMPIRAN 31

Grafik Uji Keseragaman Data Produk Cover U-Ditch Operator 4

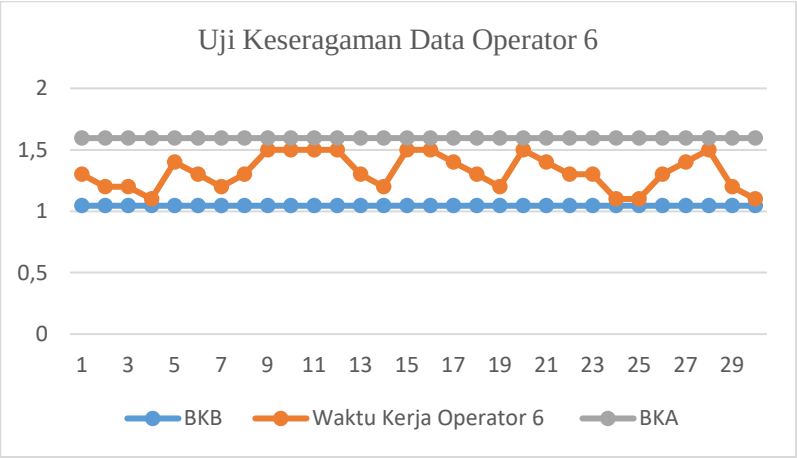


Grafik Uji Keseragaman Data Produk Cover U-Ditch Operator 5



LAMPIRAN 32

Grafik Uji Keseragaman Data Produk Cover U-Ditch Operator 6



LAMPIRAN 33

Perhitungan FTE Pekerja 8 Jam Kerja

2.Pekerja Pemotongan
Total jam elemen = $\frac{(6410\ x\ 0{,}20)+(1163\ x\ 0{,}22)+(1685\ x\ 0{,}19)\ x\ 297}{60}$ = 9197,15
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{9197{,}15}{1998}$ = 4,60

3. Pekerja Penekukan
Total jam elemen = $\frac{(1187\ x\ 1{,}08)+(217\ x\ 1{,}18)x\ 297}{60}$ = 7613,19
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{7613{,}19}{1998}$ = 3,81

4.Pekerja Merakit
Total jam elemen = $\frac{(84\ x\ 3{,}04)+(109x\ 2{,}94\ )x\ 297}{60}$ = 2850,30
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{2850{,}30}{1998}$ = 1,42

5.Pekerja Las Potong
Total jam elemen = $\frac{635\ x\ 2{,}02\ x\ 297}{60}$ = 6349,365
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{2380{,}14}{1998}$ = 3,17

6.Pekerja Pemasangan Molding
Total jam elemen = $\frac{(673\ x\ 0{,}38)+(762\ x\ 0{,}42)\ x\ 297}{60}$ = 2850,11
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{2850{,}11}{1998}$ = 1,42

7.Pekerja Pengeboran
Total jam elemen = $\frac{860\ x\ 1{,}49\ x\ 297}{60}$ = 6342,93
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{6342{,}93}{1998}$ = 3,17

8.Pekerja Pengelasan
Total jam elemen = $\frac{890\ x\ 1{,}44\ \ x\ 297}{60}$ = 6343,92
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{6343{,}92}{1998}$ = 3,17

9.Pekerja Menekuk Besi Spiral Kotak
Total jam elemen = $\frac{1077\ x\ 1{,}19\ x\ 297}{60}$ = 6344,06
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{6344{,}06}{1998}$ = 3,17

10.Pekerja Menggiling Besi Spiral Bundar
Total jam elemen = $\frac{1187\ x\ 1{,}08\ x\ 297}{60}$ = 6345,70
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{6345{,}70}{1998}$ = 3,17

11.Pekerja Penarikan Strain
Total jam elemen = $\frac{1732\ x\ 0{,}74\ x\ 297}{60}$ = 6344,316
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{6344{,}31}{1998}$ = 3,17

12.Pekerja Pencetakan
Total jam elemen = $\frac{246\ x\ 5{,}22\ x\ 297}{60}$ = 6356,39
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{6356{,}39}{1998}$ = 3,18

13.Pekerja Pengecoran
Total jam elemen = $\frac{(78\ x\ 16{,}5)+(16\ x\ 15{,}57)+(21\ x\ 15{,}37)\ x\ 297}{60}$ = 9201,50
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{9201{,}50}{1998}$ = 4,60

14.Pekerja Meratakan Semen Cor
Total jam elemen = $\frac{(155\ x\ 8{,}28)+(59\ x\ 4{,}31)+(68\ x\ 4{,}71)\ x\ 297}{60}$ = 9196,95
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{9196{,}95}{1998}$ = 4,60

15.Pekerja Pengambilan Produk Jadi
Total jam elemen = $\frac{(410\ x\ 3{,}13)+(192x\ 1{,}33)+(215x\ 1{,}49)\ x\ 297}{60}$ = 9202,1
Waktu jam kerja efektif per tahun = 1998
FTE = $\frac{9202{,}1}{1998}$ = 4,60

LAMPIRAN 34

Perhitungan FTE Pekerja 12 Jam Kerja

2.Pekerja Pemotongan
Total jam elemen = $\frac{(6410\ x\ 0{,}20)+(1163\ x\ 0{,}22)+(1685\ x\ 0{,}19)\ x\ 297}{60}$ = 9197,15
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{9197{,}15}{3067{,}2}$ = 2,99

3. Pekerja Penekukan
Total jam elemen = $\frac{(1187\ x\ 1{,}08)+(217\ x\ 1{,}18)x\ 297}{60}$ = 7613,19
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{7613{,}19}{3067{,}2}$ = 2,48

4.Pekerja Merakit
Total jam elemen = $\frac{(84\ x\ 3{,}04)+(109x\ 2{,}94\ )x\ 297}{60}$ = 2850,30
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{2850{,}30}{3067{,}2}$ = 0,92

5.Pekerja Las Potong
Total jam elemen = $\frac{635\ x\ 2{,}02\ x\ 297}{60}$ = 6349,365
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{2380{,}14}{3067{,}2}$ = 2,07

6.Pekerja Pemasangan Molding
Total jam elemen = $\frac{(673\ x\ 0{,}38)+(762\ x\ 0{,}42)\ x\ 297}{60}$ = 2850,11
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{2850{,}11}{3067{,}2}$ = 0,92

7.Pekerja Pengeboran
Total jam elemen = $\frac{860\ x\ 1{,}49\ x\ 297}{60}$ = 6342,93
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{6342{,}93}{3067{,}2}$ = 2,06

8.Pekerja Pengelasan
Total jam elemen = $\frac{890\ x\ 1{,}44\ \ x\ 297}{60}$ = 6343,92
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{6343{,}92}{}$ = 2,06

9.Pekerja Menekuk Besi Spiral Kotak
Total jam elemen = $\frac{1077\ x\ 1{,}19\ x\ 297}{60}$ = 6344,06
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{6344{,}06}{3067{,}2}$ = 2,06

10.Pekerja Menggiling Besi Spiral Bundar
Total jam elemen = $\frac{1187\ x\ 1{,}08\ x\ 297}{60}$ = 6345,70
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{6345{,}70}{3067{,}2}$ = 2,06

11.Pekerja Penarikan Strain
Total jam elemen = $\frac{1732\ x\ 0{,}74\ x\ 297}{60}$ = 6344,316
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{6344{,}31}{3067{,}2}$ = 2,06

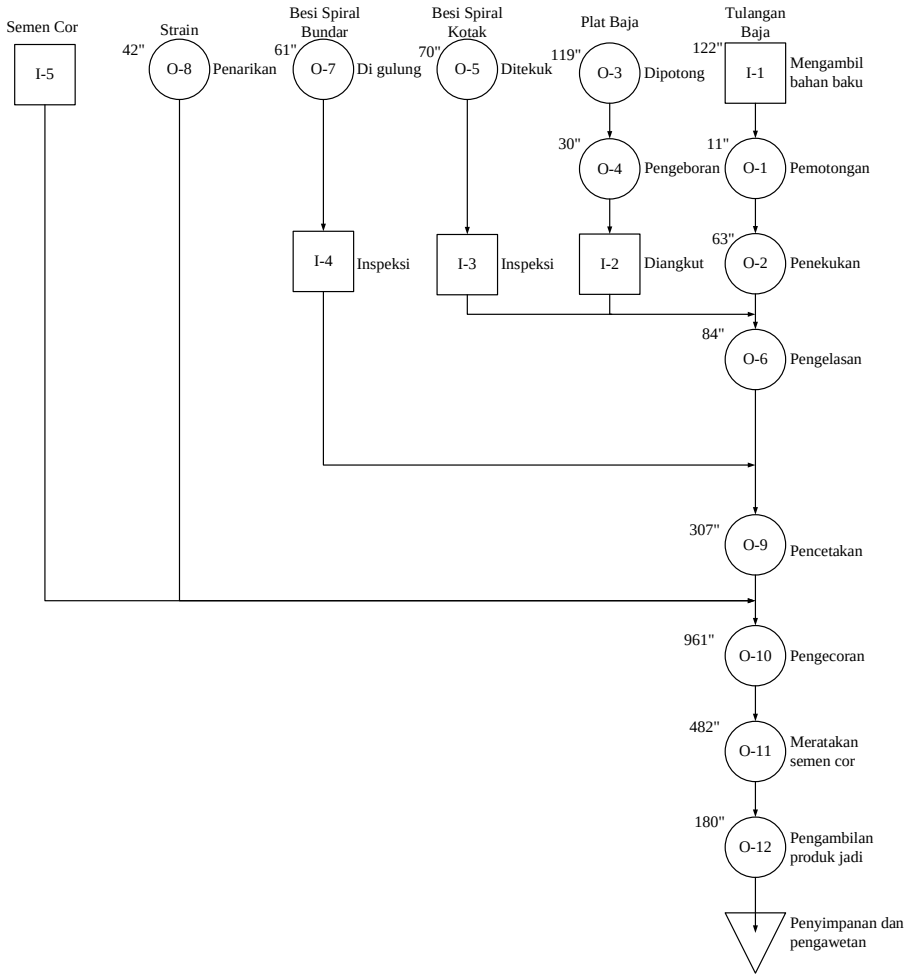
12.Pekerja Pencetakan
Total jam elemen = $\frac{246\ x\ 5{,}22\ x\ 297}{60}$ = 6356,39
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{6356{,}39}{3067{,}2}$ = 2,06

13.Pekerja Pengecoran
Total jam elemen = $\frac{(78\ x\ 16{,}5)+(16\ x\ 15{,}57)+(21\ x\ 15{,}37)\ x\ 297}{60}$ = 9201,50
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{9201{,}50}{3067{,}2}$ = 2,99

14.Pekerja Meratakan Semen Cor
Total jam elemen = $\frac{(155\ x\ 8{,}28)+(59\ x\ 4{,}31)+(68\ x\ 4{,}71)\ x\ 297}{60}$ = 9196,95
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{9196{,}95}{3067{,}2}$ = 2,99

15.Pekerja Pengambilan Produk Jadi
Total jam elemen = $\frac{(410\ x\ 3{,}13)+(192x\ 1{,}33)+(215x\ 1{,}49)\ x\ 297}{60}$ = 9202,1
Waktu jam kerja efektif per tahun = 3067,2
FTE = $\frac{9202{,}1}{3067{,}2}$ = 3

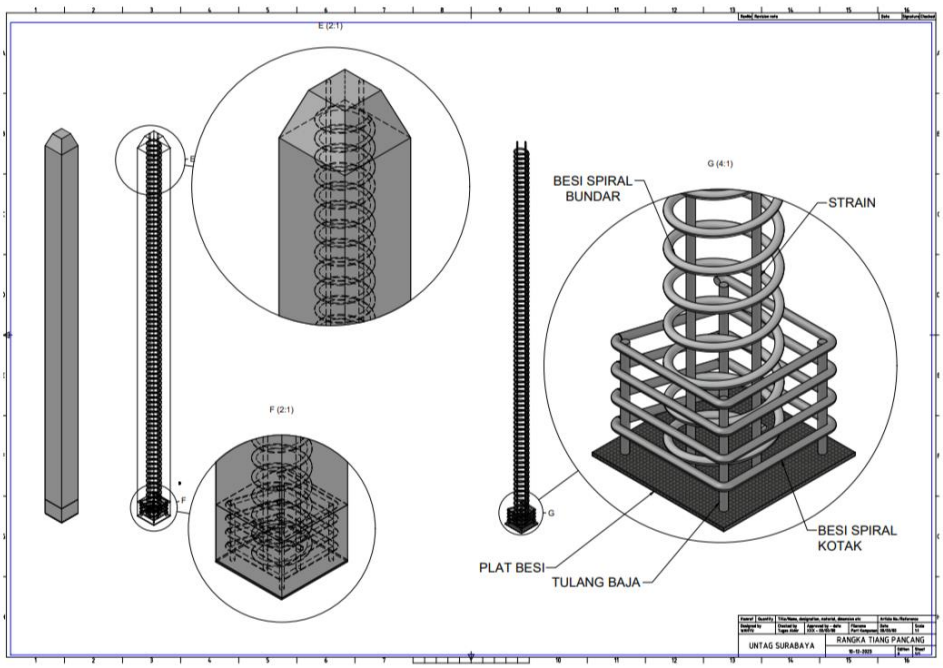
LAMPIRAN 35

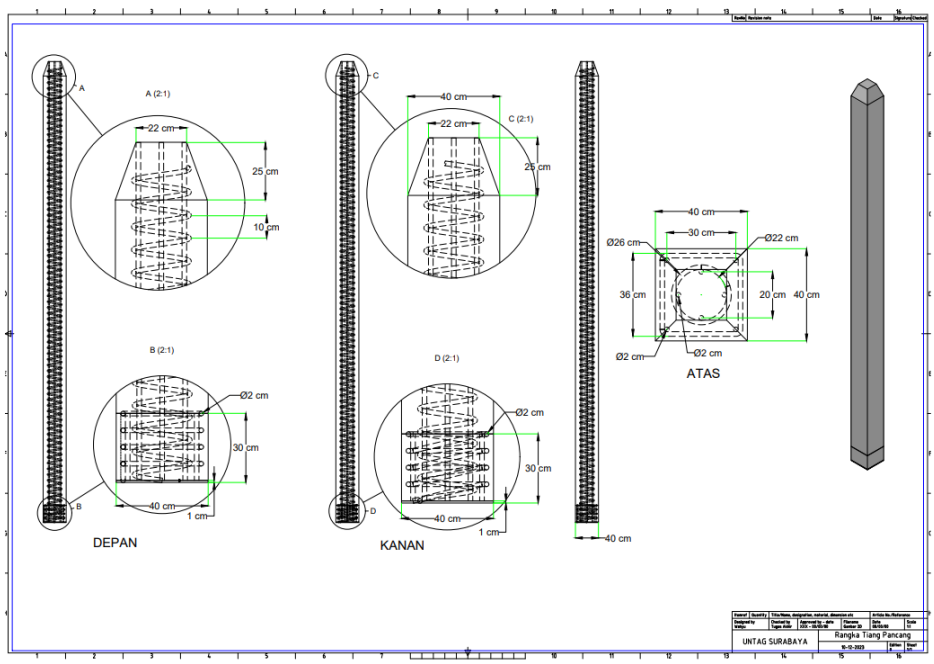


Ringkasan		
Kegiatan	Jumlah	Waktu (detik)
○	13	2592
□	4	0
Total	17	2592

Proses Produksi Beton Pracetak Tiang Pancang

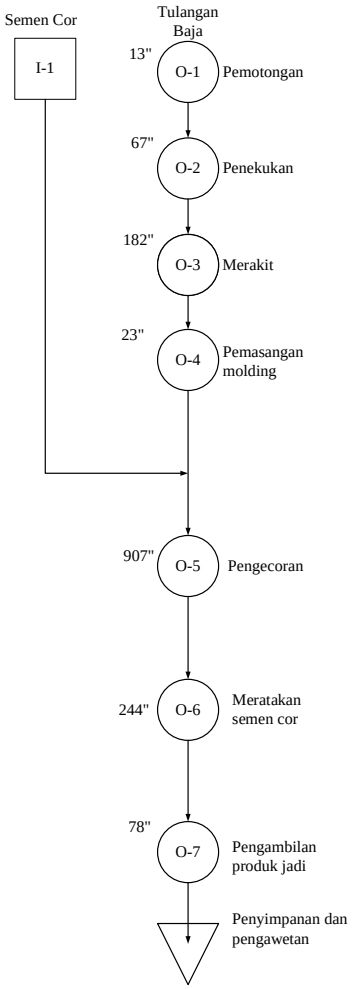
LAMPIRAN 36





Gambar Rancangan Produk Tiang Pancang

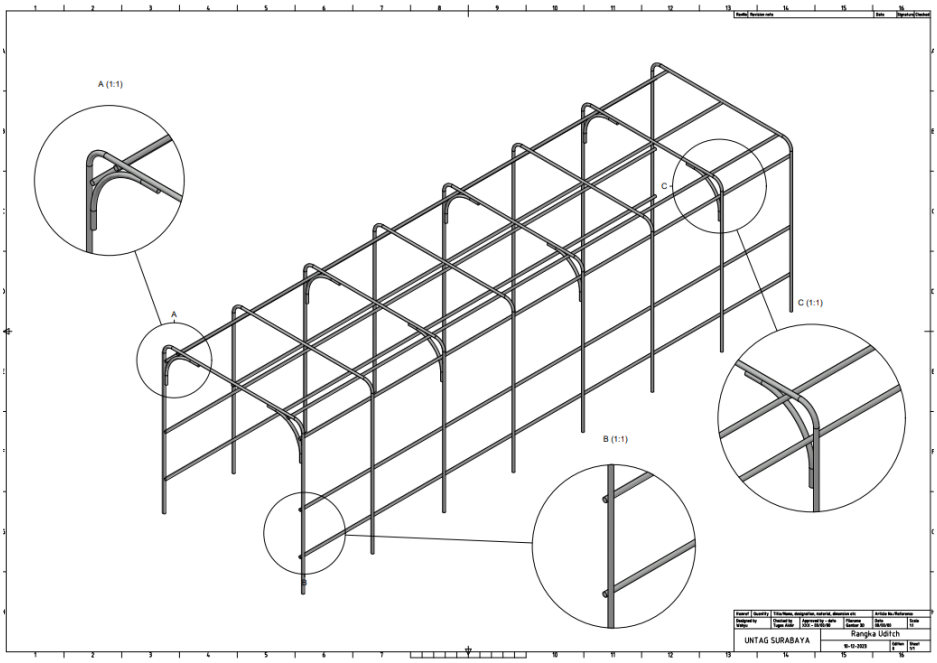
LAMPIRAN 37

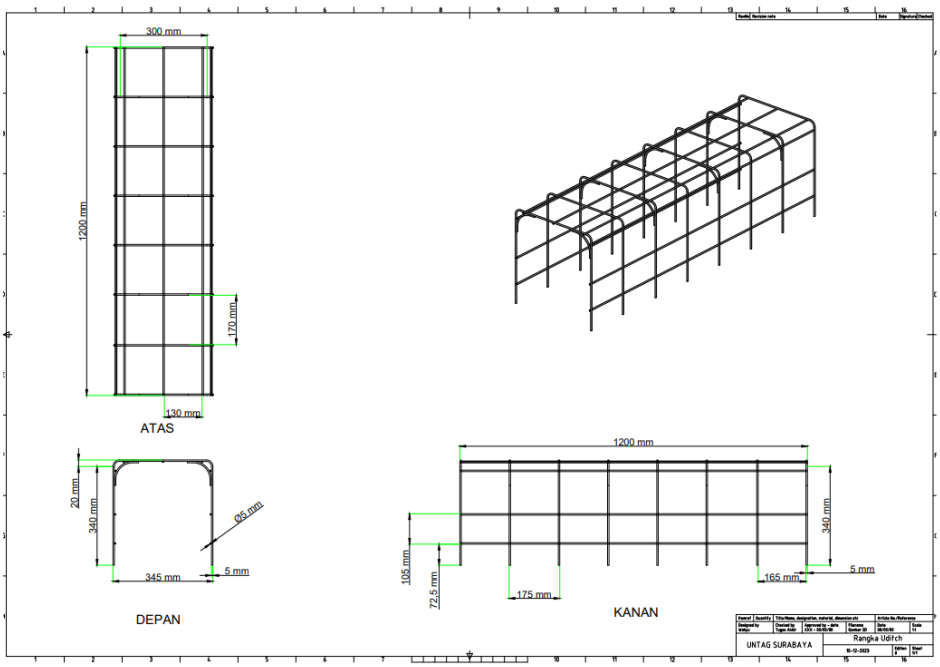


Ringkasan		
Kegiatan	Jumlah	Waktu (detik)
○	7	1515
□	1	0
Total	8	1515

Proses Produksi Beton Pracetak Uditch

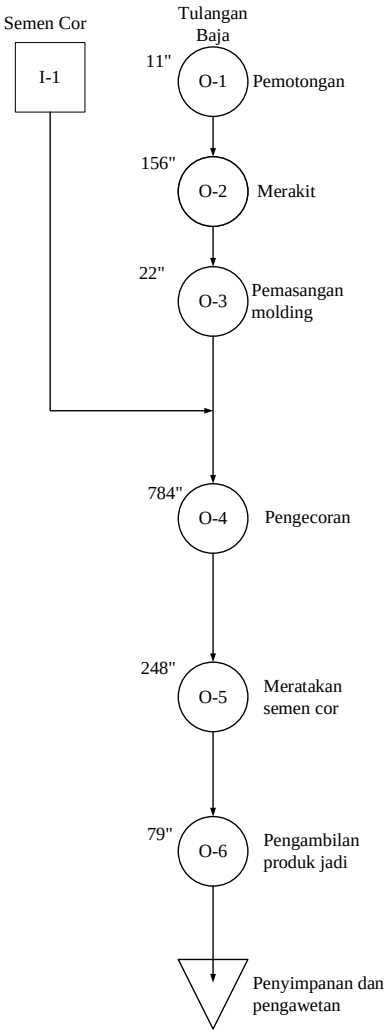
LAMPIRAN 38





Gambar Rancangan Produk U-Ditch

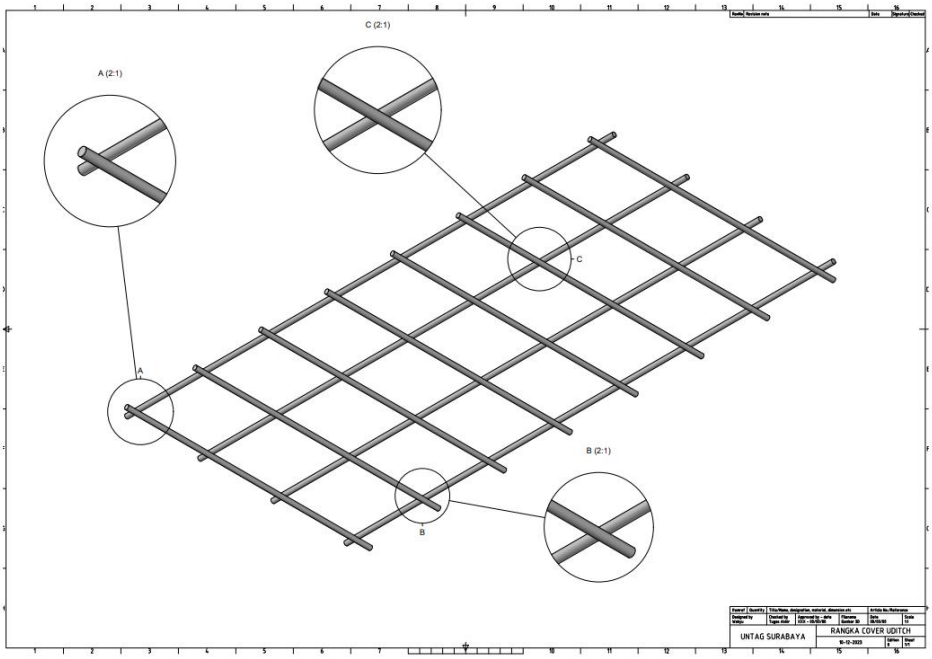
LAMPIRAN 39

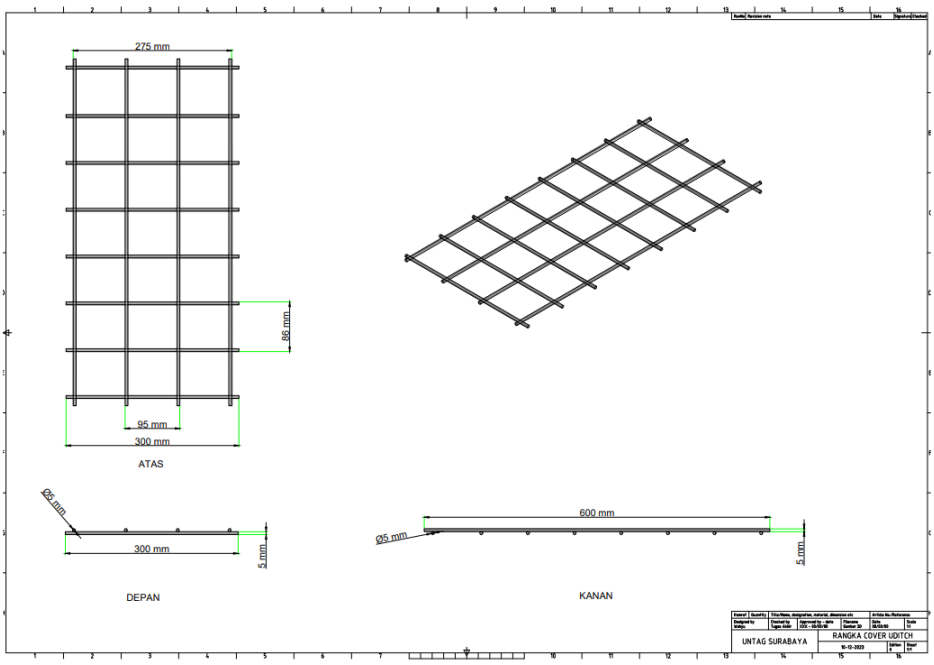


Ringkasan		
Kegiatan	Jumlah	Waktu (detik)
○	6	1300
□	1	0
Total	7	1300

Proses Produksi Beton Pracetak Cover Uditch

LAMPIRAN 40





Gambar Rancangan Produk Cover U-Ditch

LAMPIRAN 41

Surat Izin Penelitian

PT VARIA USAHA BETON
(GRUP SEMEN GRESIK)
Your Concrete Partner

Nomor : 0328/KP.00.01/11100/08.2023
Lampiran : -
Perihal : ***Surat Balasan Penelitian Tugas Akhir***

Kepada
Yth. **Dekan Fakultas Teknik**
Universitas 17 Agustus 1945
Surabaya

Dengan hormat,

Menindak lanjuti surat Penelitian Tugas Akhir No. 1136/K/FT/Akd/VII/2023 beberapa waktu lalu, pada dasarnya kami menyetujui permohonan tersebut, untuk teknis pelaksanaan menyesuaikan. Adapun mahasiswa tersebut adalah:

Nama	NIM	Fakultas
Wahyu Rahman Dani	**1411900080**	**Teknik**

Demikian atas perhatian dan kerjasamanya kami ucapkan terima kasih.

Sidoarjo, 2 Agustus 2023
PT. Varia Usaha Beton

Firly Faturrochman, SE,CTMP, CBA
Kasi Organisational Development

LAMPIRAN 42

Jurnal Bimbingan Tugas Akhir

JURNAL BIMBINGAN TUGAS AKHIR

PRODI TEKNIK INDUSTRI

SEMESTER GASAL 2023/2024

Nama : Wahyu Rahman Dani

NBI : 1911900080

Judul Penelitian : Analisis Beban Kerja Pada Produksi Beton Precetak untuk Menentukan Jumlah kebutuhan Pekerja (studi kasus PT. Varia Usaha Beton)

Dosen Pembimbing: Dr. Jaka Purnama, ST., MT

No.	Tanggal	Materi Bimbingan	Catatan Pembimbing	Paraf Pembimbing
1.	17/07/2023	Isi bab 2	menambahkan teori pengukuran pada bab 2	
2.	20/07/2023	Isi bab 3, penulisan	merubah bagian pada bab 3, menambah lampiran	
3	28/07/23	bab 2	tambah teori produksi	
4	3/8/23	bab 3	Metodologi penelitian	
5	10/8/23	bab 3	flow chart penelitian	
6	14/8/23	bab 2	tambah teori & flow chart	
7	21/8/23	PPT.	PPT. diperbaiki	
8	28/8/23	PPT	Ujian tambah	
9	28/9/23	pengolah data	pengolah data dilanjut	
10	18/10/23	bab Analisa	Analisa data	
11	19/10/23	bab Analisa	pengolah data	
12	26/10/23	bab Analisa	data	
13	2/11/23	bab Analisis	Data	
14	7/11/23	bab kesimpulan & saran.		
15	16/11/23	Jurnal	publikasi	
16				

Lembar Revisi Sidang Tugas Akhir

Lampiran 43

UNIVERSITAS 17 AGUSTUS 1945 SURABAYA
FAKUTAS TEKNIK
PROGRAM STUDI TEKNIK INDUSTRI

REVISI SIDANG TUGAS AKHIR

NAMA : Wahyu Rahman Dani
NBI : 1411900080
JUDUL : ANALISIS BEBAN KERJA PADA PRODUKSI BETON PRACETAK UNTUK MENENTUKAN JUMLAH KEBUTUHAN PEKERJA
(Studi Kasus PT. Varia Usaha Beton)

BATAS BIMBINGAN REVISI : 1 Minggu setelah Sidang

NO	URAIAN	BAB	HALAMAN
1)	OPC Grade gg ?		
2)	Gambarkan Rancangan Lengkap. Tri produk !!		

NO	URAIAN	BAB	HALAMAN
	P. Handy :		
1.	Allowance berdasarkan pengambilan data langsung. ✓		
2.	Dijelaskan pemberi nilai Performance rating ✓		
3.	Tabel PF ditambah perhitungannya, dilengkapi operator ✓		
4.	Biaya penambahan tenaga kerja atau insentif lembur ✓		
5.	Bab 5 kesimpulan telah ada tabel, kesimpulan ✓		
6.	Saran untuk penelitian selanjutnya ✓		

Handy

Surabaya, 07 Desember 2023

Telah Direvisi,
Dosen Penguji 1,

Ir. Mochamad Singgih, MM

Dosen Penguji 2,

Handy Febri Satoto, ST., MT.

Mengetahui
Dosen Pembimbing/Ketua Penguji,

Dr. Jaka Purnama, ST., MT

“halaman ini sengaja dikosongkan"

BIOGRAFI

Penulis bernama Wahyu Rahman Dani lahir pada tanggal 19 Desember 2000 di Sidoarjo, anak dari pasangan suami istri Bapak Suratman dan Ibu Suhartatik, Masuk SD Negeri Gilang 1 pada tahun 2007 dan lulus pada tahun 2013, masuk SMP YPM 1 Taman pada tahun 2013 dan lulus pada tahun 2016, masuk SMA Wachid Hasyim 2 Taman pada tahun 2016 dan lulus pada tahun 2019. Pada tahun 2019 masuk di Universitas 17 Agustus 1945 Surabaya dan melanjutkan S1 di jurusan Teknik Industri