

Lampiran A

- *Perhitungan Biaya Setup*

Nama <i>Assembly / Sub Assembly</i>	Proses	Nama Mesin	Jumlah	Satuan	Rata - rata Lamanya Waktu Pemanasan Mesin (menit)	Rata - rata Total KWH yang Digunakan	Rata - rata Lamanya Waktu Persiapan Alat (menit)	Rata - rata Jumlah Tenaga Kerja	Total Upah Tenaga Kerja (Rp)	Total Biaya Listrik (Rp)	Total Biaya Setup (Rp)
<i>Strainer Assy Fuel</i>	<i>Press</i>	<i>PM I AMINO</i>	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01
	<i>Welding</i>	<i>Spot Welder</i>	2	line	5	2	5	4	3.055,55	95,24	3.150,79
		<i>Seam Welder</i>	2	line	5	6,4	5	4	3.055,55	304,76	3.360,32
		<i>Fine Boring</i>	2	line	5	3	5	4	3.055,55	142,86	3.198,41
	<i>Painting Steel</i>	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85
		<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
		<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56
	<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
	Total									18.180,54	6.776,21
<i>Tank Comp Fuel Assy</i>	<i>Press</i>	<i>PM I AMINO</i>	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01
		<i>PM II AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM III AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM IV AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM V AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM VII AISAI</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
	<i>Welding</i>	<i>Spot Welder</i>	2	line	5	2	5	4	3.055,55	95,24	3.150,79
		<i>Seam Welder</i>	2	line	5	6,4	5	4	3.055,55	304,76	3.360,32
		<i>Fine Boring</i>	2	line	5	3	5	4	3.055,55	142,86	3.198,41
	<i>Painting Steel</i>	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85
		<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
		<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56
	<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
Total									29.638,87	23.919,11	53.557,97
<i>Tank Comp Fuel</i>	<i>Press</i>	<i>PM I AMINO</i>	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01
		<i>PM II AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM III AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM IV AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM V AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		<i>PM VII AISAI</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
	<i>Welding</i>	<i>Spot Welder</i>	2	line	5	2	5	4	3.055,55	95,24	3.150,79
		<i>Seam Welder</i>	2	line	5	6,4	5	4	3.055,55	304,76	3.360,32
		<i>Fine Boring</i>	2	line	5	3	5	4	3.055,55	142,86	3.198,41
	<i>Painting Steel</i>	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85

<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
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		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42	
		<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56	
		<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
		Total								29.638,87	23.919,11	53.557,97
<i>Half Lower</i>	<i>Press</i>	<i>PM VI AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
		<i>AMADA</i>	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01	
	<i>Welding</i>	<i>Spot Welder</i>	2	line	5	2	5	4	3.055,55	95,24	3.150,79	
		<i>Seam Welder</i>	2	line	5	6,4	5	4	3.055,55	304,76	3.360,32	
		<i>Fine Boring</i>	2	line	5	3	5	4	3.055,55	142,86	3.198,41	
	<i>Painting Steel</i>	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13	
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13	
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99	
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85	
		<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28	
		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42	
		<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56	
		<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
			Total								20.472,21	10.204,79
<i>Hose Assy Asv</i>	<i>Press</i>	<i>PM II AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
		<i>PM III AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
	<i>Welding</i>	<i>Spot Welder</i>	2	line	5	2	5	4	3.055,55	95,24	3.150,79	
		<i>Seam Welder</i>	2	line	5	6,4	5	4	3.055,55	304,76	3.360,32	
		<i>Fine Boring</i>	2	line	5	3	5	4	3.055,55	142,86	3.198,41	
	<i>Painting Steel</i>	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13	
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13	
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99	
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85	
		<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28	
		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42	
		<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56	
		<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
			Total								20.472,21	10.300,03
<i>Case Drive Chain</i>	<i>Press</i>	<i>PM III AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
		<i>PM V AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
		<i>PM VII AISAI</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
	<i>Welding</i>	<i>Spot Welder</i>	2	line	5	2	5	4	3.055,55	95,24	3.150,79	
		<i>Seam Welder</i>	2	line	5	6,4	5	4	3.055,55	304,76	3.360,32	
		<i>Fine Boring</i>	2	line	5	3	5	4	3.055,55	142,86	3.198,41	
	<i>Painting Steel</i>	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13	
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13	
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99	
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85	
		<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28	
		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42	
		<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56	
		<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	

	Total						22.763,87	13.728,61	36.492,48	
	<i>PM II AIDA</i>	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25

Frame Body Comp	Press	PM III AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		PM V AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
	Welding	Manual	30	unit	-	-	5	15	5.729,16	0,00	5.729,16
		Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86
	Pompa Sirkulasi		1	unit	6	0,4	5	1	840,28	22,86	863,13
	Rectifier Chuo Seisasukuo		1	unit	6	1,5	5	1	840,28	85,71	925,99
	Paint Pump Iwata PPS-20		1	unit	6	0,5	5	1	840,28	28,57	868,85
	Burner (Weishaupt L5-RL)		1	unit	6	3,5	5	1	840,28	200,00	1.040,28
	Air Supply Fan		1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
	Baby Grinder (Nitto Air Tools)		1	unit	6	0,6	5	1	840,28	34,29	874,56
Conveyor	1		unit	6	25	5	1	840,28	1.428,58	2.268,85	
Total									19.326,37	13.185,75	32.512,12
Front Frame Comp	Press	PM II AIDA	1	unit	10	36	5	1	1.145,83	3.428,58	4.574,41
		PM III AIDA	1	unit	10	36	5	1	1.145,83	3.428,58	4.574,41
		PM V AIDA	1	unit	10	36	5	1	1.145,83	3.428,58	4.574,41
	Welding	Manual	30	unit	-	-	5	10	3.819,44	0,00	3.819,44
		Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86
	Pompa Sirkulasi		1	unit	6	0,4	5	1	840,28	22,86	863,13
	Rectifier Chuo Seisasukuo		1	unit	6	1,5	5	1	840,28	85,71	925,99
	Paint Pump Iwata PPS-20		1	unit	6	0,5	5	1	840,28	28,57	868,85
	Burner (Weishaupt L5-RL)		1	unit	6	3,5	5	1	840,28	200,00	1.040,28
	Air Supply Fan		1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
Baby Grinder (Nitto Air Tools)	1		unit	6	0,6	5	1	840,28	34,29	874,56	
Conveyor	1		unit	6	25	5	1	840,28	1.428,58	2.268,85	
Total									13.979,16	13.185,75	27.164,90
Rear Frame Comp	Press	PM V AIDA	1	unit	10	36	5	1	1.145,83	3.428,58	4.574,41
		AMADA	1	unit	10	35	5	1	1.145,83	3.333,34	4.479,17
	Welding	Manual	30	unit	-	-	5	10	3.819,44	0,00	3.819,44
		Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86
	Pompa Sirkulasi		1	unit	6	0,4	5	1	840,28	22,86	863,13
	Rectifier Chuo Seisasukuo		1	unit	6	1,5	5	1	840,28	85,71	925,99
	Paint Pump Iwata PPS-20		1	unit	6	0,5	5	1	840,28	28,57	868,85
	Burner (Weishaupt L5-RL)		1	unit	6	3,5	5	1	840,28	200,00	1.040,28
	Air Supply Fan		1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
	Baby Grinder (Nitto Air Tools)		1	unit	6	0,6	5	1	840,28	34,29	874,56
Conveyor	1		unit	6	25	5	1	840,28	1.428,58	2.268,85	
Total									12.833,32	9.661,93	22.495,25
Pipe R Und Cross	Press	PM II AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		PM V AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
		PM VI AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25
	Welding	Manual	30	unit	-	-	5	10	3.819,44	0,00	3.819,44
		Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86
	Pompa Sirkulasi		1	unit	6	0,4	5	1	840,28	22,86	863,13
	Rectifier Chuo Seisasukuo		1	unit	6	1,5	5	1	840,28	85,71	925,99
	Painting Steel	Paint Pump Iwata PPS-20	1	unit	6	0,5	5	1	840,28	28,57	868,85
Burner (Weishaupt L5-RL)		1	unit	6	3,5	5	1	840,28	200,00	1.040,28	

<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56

		Conveyor	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
		Total							17.416,65	13.185,75	30.602,40	
Pipe L Und Cross	Press	PM II AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
		PM V AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
		PM VI AIDA	1	unit	10	36	5	2	2.291,67	3.428,58	5.720,25	
	Welding	Manual	30	unit	-	-	5	10	3.819,44	0,00	3.819,44	
		Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86	883,13
	Pompa Sirkulasi		1	unit	6	0,4	5	1	840,28	22,86	863,13	
	Rectifier Chuo Seisusukuo		1	unit	6	1,5	5	1	840,28	85,71	925,99	
	Paint Pump Iwata PPS-20		1	unit	6	0,5	5	1	840,28	28,57	868,85	
	Burner (Weishaupt L5-RL)		1	unit	6	3,5	5	1	840,28	200,00	1.040,28	
	Air Supply Fan		1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42	
	Baby Grinder (Nitto Air Tools)		1	unit	6	0,6	5	1	840,28	34,29	874,56	
			Conveyor	1	unit	6	25	5	1	840,28	1.428,58	2.268,85
			Total							17.416,65	13.185,75	30.602,40
	Weight Assy Hndl	Plastic Injection	Toshiba IS 315 CN II	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22
Toshiba IS 350 GS			2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70	
KM 420 C - SP 2700			4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15	
Toshiba IS 550 GS			1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86	
Toshiba IS 850 GTW			2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79	
JSW 550 SS II			1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76	
Toshiba IS 450 E			1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90	
Toshiba IS 550 E			2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23	
Toshiba IS 1050 GT			4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74	
Toshiba IS 650 E			1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10	
Toshiba IS 850 GT			1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30	
Toshiba IS 450 GS			1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
KM 500 C - SP 3500			1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
Painting Plastic		Paint Pump	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
			Total							30.173,59	255.812,54	285.986,13
Set Illust Hndl FR Type	Plastic Injection	Toshiba IS 315 CN II	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22	
		Toshiba IS 350 GS	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70	
		KM 420 C - SP 2700	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15	
		Toshiba IS 550 GS	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86	
		Toshiba IS 850 GTW	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79	
		JSW 550 SS II	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76	
		Toshiba IS 450 E	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90	
		Toshiba IS 550 E	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23	
		Toshiba IS 1050 GT	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74	
		Toshiba IS 650 E	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10	
		Toshiba IS 850 GT	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30	
		Toshiba IS 450 GS	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
		KM 500 C - SP 3500	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
	Painting Plastic	Paint Pump	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
			Total							30.173,59	255.812,54	285.986,13
		Toshiba IS 315 CN II	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22	

<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70
<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15

<i>Set Illust R M/P Side</i>	<i>Plastic Injection</i>	<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74
		<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10
		<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30
		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85
	<i>KM 500 C - SP 3500</i>	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
<i>Painting Plastic</i>	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
Total									30.173,59	255.812,54	285.986,13
<i>Set Illust L M/P Side</i>	<i>Plastic Injection</i>	<i>Toshiba IS 315 CN II</i>	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22
		<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70
		<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15
		<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74
		<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10
		<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30
		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85
	<i>KM 500 C - SP 3500</i>	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
<i>Painting Plastic</i>	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
Total									30.173,59	255.812,54	285.986,13
<i>Wheel Assy Rear</i>	<i>Rim Forming</i>	<i>Uncoiler</i>	1	unit	8	2,2	5	2	1.986,11	167,62	2.153,73
		<i>Hand Grinder</i>	1	unit	8	0,95	5	2	1.986,11	72,38	2.058,49
		<i>Seam Welder Chuo Seisakusho</i>	1	unit	8	3,2	5	2	1.986,11	243,81	2.229,92
		<i>Bending Cutting Nanchi Fujikusho</i>	1	unit	8	3,5	5	2	1.986,11	266,67	2.252,78
		<i>Flash Butt FA III 90 Chuo Seisakusho</i>	1	unit	8	5,5	5	2	1.986,11	419,05	2.405,16
		<i>Grinding Machine</i>	1	unit	8	0,83	5	2	1.986,11	63,24	2.049,35
		<i>Smoothing Rol</i>	2	unit	8	4	5	2	1.986,11	304,76	2.290,87
		<i>Auto Buffing Daily Technic</i>	1	unit	8	1,2	5	2	1.986,11	91,43	2.077,54
		<i>Punching Daily Technic</i>	3	unit	8	15	5	3	2.979,16	1.142,86	4.122,02
Total									18.868,04	2.771,82	21.639,86
<i>Set Illust R Body Cover T</i>	<i>Plastic Injection</i>	<i>Toshiba IS 315 CN II</i>	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22
		<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70
		<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15
		<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74

<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10
<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30

		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
		<i>KM 500 C - SP 3500</i>	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
	<i>Painting Plastic</i>	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
		Total								30.173,59	255.812,54	285.986,13
<i>Set Illust L Body Cover T</i>	<i>Plastic Injection</i>	<i>Toshiba IS 315 CN II</i>	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22	
		<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70	
		<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15	
		<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86	
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79	
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76	
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90	
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23	
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74	
		<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10	
		<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30	
		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
		<i>KM 500 C - SP 3500</i>	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
	<i>Painting Plastic</i>	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
		Total								30.173,59	255.812,54	285.986,13
<i>Set Illust R Side Cover</i>	<i>Plastic Injection</i>	<i>Toshiba IS 315 CN II</i>	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22	
		<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70	
		<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15	
		<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86	
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79	
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76	
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90	
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23	
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74	
		<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10	
		<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30	
		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
		<i>KM 500 C - SP 3500</i>	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77	
	<i>Painting Plastic</i>	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78	
		Total								30.173,59	255.812,54	285.986,13
<i>Set Illust L Side Cover</i>	<i>Plastic Injection</i>	<i>Toshiba IS 315 CN II</i>	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22	
		<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70	
		<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15	
		<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86	
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79	
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76	
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90	
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23	
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74	
		<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10	
		<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30	
		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
		<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	

	<i>KM 500 C - SP 3500</i>	1	unit	10	134	5	1	1.145,83	12.761,94	13.907,77
<i>Painting Plastic</i>	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78

		Total						30.173,59	255.812,54	285.986,13	
<i>Set Illust Tail Cover</i>	Plastic Injection	<i>Toshiba IS 315 CN II</i>	4	unit	10	121,2	5	4	4.583,33	11.542,89	16.126,22
		<i>Toshiba IS 350 GS</i>	2	unit	10	126	5	2	2.291,67	12.000,03	14.291,70
		<i>KM 420 C - SP 2700</i>	4	unit	10	444	5	4	4.583,33	42.285,82	46.869,15
		<i>Toshiba IS 550 GS</i>	1	unit	10	98,7	5	1	1.145,83	9.400,02	10.545,86
		<i>Toshiba IS 850 GTW</i>	2	unit	10	315,2	5	2	2.291,67	30.019,12	32.310,79
		<i>JSW 550 SS II</i>	1	unit	10	113	5	1	1.145,83	10.761,93	11.907,76
		<i>Toshiba IS 450 E</i>	1	unit	10	75,8	5	1	1.145,83	7.219,07	8.364,90
		<i>Toshiba IS 550 E</i>	2	unit	10	178,6	5	2	2.291,67	17.009,57	19.301,23
		<i>Toshiba IS 1050 GT</i>	4	unit	10	710,8	5	4	4.583,33	67.695,41	72.278,74
		<i>Toshiba IS 650 E</i>	1	unit	10	122,8	5	1	1.145,83	11.695,27	12.841,10
		<i>Toshiba IS 850 GT</i>	1	unit	10	169,8	5	1	1.145,83	16.171,47	17.317,30
	<i>Toshiba IS 450 GS</i>	1	unit	10	73,5	5	1	1.145,83	7.000,02	8.145,85	
	Painting Plastic	<i>Paint Pump</i>	7	unit	5	5,25	5	2	1.527,78	250,00	1.777,78
		Total						30.173,59	255.812,54	285.986,13	
<i>Wheel Assy FR</i>	Rim Forming	<i>Uncoiler</i>	1	unit	8	2,2	5	2	1.986,11	167,62	2.153,73
		<i>Hand Grinder</i>	1	unit	8	0,95	5	2	1.986,11	72,38	2.058,49
		<i>Seam Welder Chuo Seisakusho</i>	1	unit	8	3,2	5	2	1.986,11	243,81	2.229,92
		<i>Bending Cutting Nanchi Fujikusho</i>	1	unit	8	3,5	5	2	1.986,11	266,67	2.252,78
		<i>Flash Butt FA III 90 Chuo Seisakusho</i>	1	unit	8	5,5	5	2	1.986,11	419,05	2.405,16
		<i>Grinding Machine</i>	1	unit	8	0,83	5	2	1.986,11	63,24	2.049,35
		<i>Smoothing Rol</i>	2	unit	8	4	5	2	1.986,11	304,76	2.290,87
		<i>Auto Buffing Daily Technic</i>	1	unit	8	1,2	5	2	1.986,11	91,43	2.077,54
		<i>Punching Daily Technic</i>	3	unit	8	15	5	3	2.979,16	1.142,86	4.122,02
		Total						18.868,04	2.771,82	21.639,86	
<i>Cover Assy Handle Rear</i>	Rim Forming	<i>Uncoiler</i>	1	unit	8	2,2	5	2	1.986,11	167,62	2.153,73
		<i>Hand Grinder</i>	1	unit	8	0,95	5	2	1.986,11	72,38	2.058,49
		<i>Seam Welder Chuo Seisakusho</i>	1	unit	8	3,2	5	2	1.986,11	243,81	2.229,92
		<i>Bending Cutting Nanchi Fujikusho</i>	1	unit	8	3,5	5	2	1.986,11	266,67	2.252,78
		<i>Flash Butt FA III 90 Chuo Seisakusho</i>	1	unit	8	5,5	5	2	1.986,11	419,05	2.405,16
		<i>Grinding Machine</i>	1	unit	8	0,83	5	2	1.986,11	63,24	2.049,35
		<i>Smoothing Rol</i>	2	unit	8	4	5	2	1.986,11	304,76	2.290,87
		<i>Auto Buffing Daily Technic</i>	1	unit	8	1,2	5	2	1.986,11	91,43	2.077,54
		<i>Punching Daily Technic</i>	3	unit	8	15	5	3	2.979,16	1.142,86	4.122,02
		Total						18.868,04	2.771,82	21.639,86	
<i>Swingarm Assy RR NH - 255 M</i>	Press	<i>AMADA</i>	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01
	Welding	<i>Spot Welder</i>	4	line	5	4	5	8	6.111,11	190,48	6.301,58
		<i>Seam Welder</i>	4	line	5	12,8	5	8	6.111,11	609,53	6.720,63
		<i>Fine Boring</i>	4	line	5	6	5	8	6.111,11	285,72	6.396,82
	Painting Steel	<i>Pompa Cat Ebara / Honda Kuki</i>	1	unit	6	0,75	5	1	840,28	42,86	883,13
		<i>Pompa Sirkulasi</i>	1	unit	6	0,4	5	1	840,28	22,86	863,13
		<i>Rectifier Chuo Seisasukuo</i>	1	unit	6	1,5	5	1	840,28	85,71	925,99
		<i>Paint Pump Iwata PPS-20</i>	1	unit	6	0,5	5	1	840,28	28,57	868,85
		<i>Burner (Weishaupt L5-RL)</i>	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
		<i>Air Supply Fan</i>	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42

<i>Baby Grinder (Nitto Air Tools)</i>	1	unit	6	0,6	5	1	840,28	34,29	874,56
<i>Conveyor</i>	1	unit	6	25	5	1	840,28	1.428,58	2.268,85

				Total				27.347,20	7.319,07	34.666,27	
Swingarm Comp RR NH - 255 M	Press	AMADA	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01
	Welding	Spot Welder	4	line	5	4	5	8	6.111,11	190,48	6.301,58
		Seam Welder	4	line	5	12,8	5	8	6.111,11	609,53	6.720,63
		Fine Boring	4	line	5	6	5	8	6.111,11	285,72	6.396,82
	Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86	883,13
		Pompa Sirkulasi	1	unit	6	0,4	5	1	840,28	22,86	863,13
		Rectifier Chuo Seisasukuo	1	unit	6	1,5	5	1	840,28	85,71	925,99
		Paint Pump Iwata PPS-20	1	unit	6	0,5	5	1	840,28	28,57	868,85
		Burner (Weishaupt L5-RL)	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
		Air Supply Fan	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
		Baby Grinder (Nitto Air Tools)	1	unit	6	0,6	5	1	840,28	34,29	874,56
	Conveyor	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
					Total				27.347,20	7.319,07	34.666,27
Swingarm Comp	Press	AMADA	1	unit	10	35	5	2	2.291,67	3.333,34	5.625,01
	Welding	Spot Welder	4	line	5	4	5	8	6.111,11	190,48	6.301,58
		Seam Welder	4	line	5	12,8	5	8	6.111,11	609,53	6.720,63
		Fine Boring	4	line	5	6	5	8	6.111,11	285,72	6.396,82
	Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86	883,13
		Pompa Sirkulasi	1	unit	6	0,4	5	1	840,28	22,86	863,13
		Rectifier Chuo Seisasukuo	1	unit	6	1,5	5	1	840,28	85,71	925,99
		Paint Pump Iwata PPS-20	1	unit	6	0,5	5	1	840,28	28,57	868,85
		Burner (Weishaupt L5-RL)	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
		Air Supply Fan	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
		Baby Grinder (Nitto Air Tools)	1	unit	6	0,6	5	1	840,28	34,29	874,56
	Conveyor	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
					Total				27.347,20	7.319,07	34.666,27
Coil Assy Cap Suppressor	Press	AMADA	1	unit	10	35	5	1	1.145,83	3.333,34	4.479,17
	Welding	Spot Welder	4	line	5	4	5	8	6.111,11	190,48	6.301,58
		Seam Welder	4	line	5	12,8	5	8	6.111,11	609,53	6.720,63
		Fine Boring	4	line	5	6	5	8	6.111,11	285,72	6.396,82
	Painting Steel	Pompa Cat Ebara / Honda Kuki	1	unit	6	0,75	5	1	840,28	42,86	883,13
		Pompa Sirkulasi	1	unit	6	0,4	5	1	840,28	22,86	863,13
		Rectifier Chuo Seisasukuo	1	unit	6	1,5	5	1	840,28	85,71	925,99
		Paint Pump Iwata PPS-20	1	unit	6	0,5	5	1	840,28	28,57	868,85
		Burner (Weishaupt L5-RL)	1	unit	6	3,5	5	1	840,28	200,00	1.040,28
		Air Supply Fan	1	unit	6	18,5	5	1	840,28	1.057,15	1.897,42
		Baby Grinder (Nitto Air Tools)	1	unit	6	0,6	5	1	840,28	34,29	874,56
	Conveyor	1	unit	6	25	5	1	840,28	1.428,58	2.268,85	
					Total				26.201,37	7.319,07	33.520,44

KOMENTAR DOSEN PENGUJI

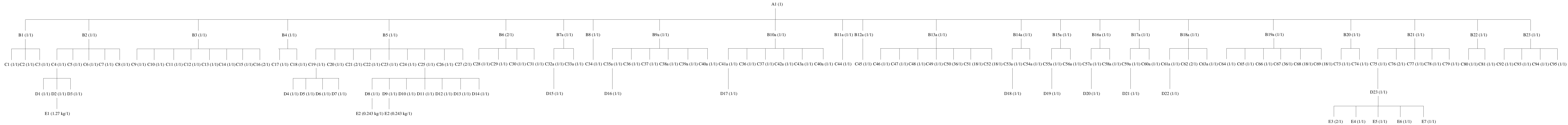
Nama Mahasiswi : Rainisa Maini Heryanto
NRP : 0323010
Judul Tugas Akhir : Usulan Penerapan Teknik *Lot Sizing Wagner Whitin*
Dalam Proses MRP Di PT."X", Jakarta

Komentar – komentar Dosen Penguji :

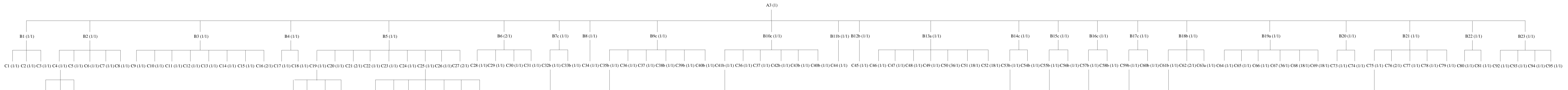
1. Teori sudah baik
2. Teknik *lot sizing Lot For Lot* tetap dapat dipertahankan untuk *assembly level* satu
3. *Software* usulan dan cara menerapkan harus dijelaskan
4. Metode usulan jangan dikemukakan dulu pada Bab 1, tapi pada Bab 3
5. Tambahkan asumsi : tidak terjadi perubahan Jadwal Induk Produksi
6. Perhitungan total ongkos pesan perlu direvisi karena komponen – komponen yang dipesan dari *supplier* yang sama dipesan bersamaan
7. Perbaiki paragraf terakhir Bab 1

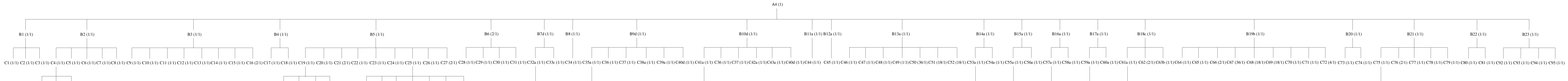
DATA PENULIS

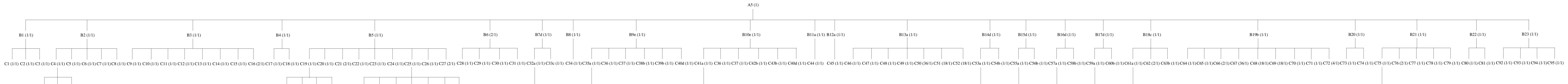
Nama : Rainisa Maini Heryanto
Alamat : Jalan Terusan Purabaya No 61 A / 66 Bandung
Tempat tanggal lahir : Bandung, 16 Mei 1985
No *Handphone* : 08122333634 / (022) 91383895
Alamat email : rainisa_heryanto@yahoo.com
Pendidikan : SMU Trinitas, Bandung
Jurusan Teknik Industri Universitas Kristen Maranatha
Nilai Tugas Akhir : A
Tanggal USTA : 6 Februari 2007

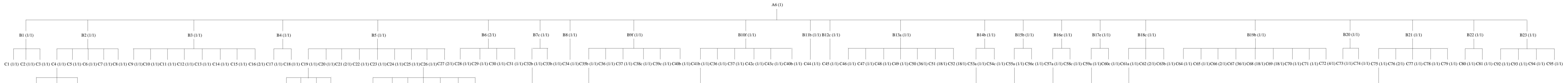


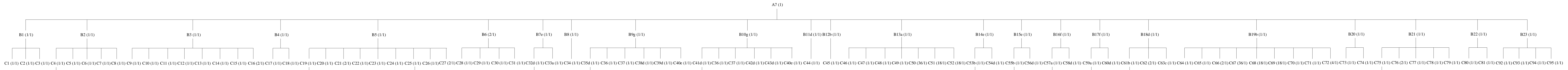
Gambar 4.3
Struktur Produk Sepeda Motor Tipe P Warna BK

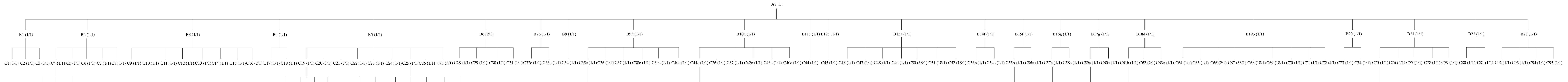


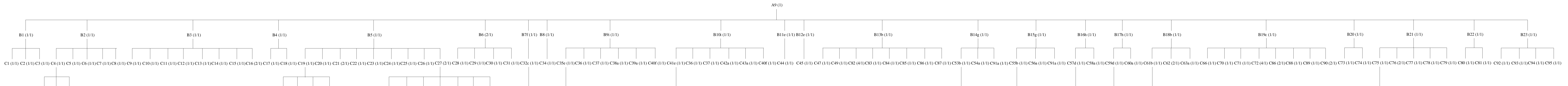


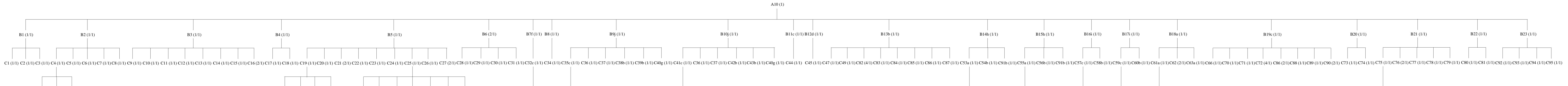


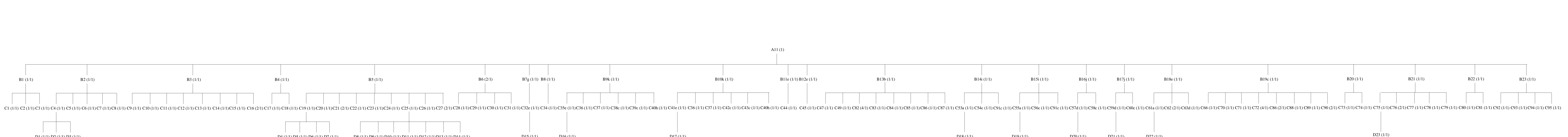












Lampiran C

- *Gambar Struktur Produk / Bill Of Material (BOM)*