

LAMPIRAN 1
BIODATA PENULIS

LAMPIRAN 1
BIODATA PENULIS



Nama : Rifki Adi Fauzani
Tempat, tanggal lahir : Cilacap, 4 Mei 2002
NIM : 210203022
Jurusan : Rekayasa Mesin dan Industri pertanian
E-mail : rifkiadifauzani@gmail.com
Alamat : Jalan Nuri Barat RT 02/RW 01, Tegalreja,
Kec. Cilacap Selatan, Kab. Cilacap
Telephone/HP : 081393799655
Hobi : Futsal, sepak bola, mancing
Motto hidup : Berani melangkah adalah langkah awal menuju
kesuksesan

Riwayat Pendidikan

Jenjang	Nama Institusi	Jurusan	Tahun
SD	SD Negeri 02 Tegalreja	-	2008-2014
SMP	SMP Negeri 2 Cilacap	-	2014-2017
SMK	SMK Boedi Oetomo 1 Cilacap	Teknik Pemesinan	2017-2020
Perguruan tinggi	Politeknik Negeri Cilacap	Rekayasa Mesin dan Industri pertanian	2021-2024

LAMPIRAN 2
DETAIL DRAWING

LAMPIRAN 2
DETAIL *DRAWING*

LAMPIRAN 3
DATA PERHITUNGAN UMUR *BEARING*

LAMPIRAN 3
DATA PERHITUNGAN UMUR BEARING

Tabel 1A Pemilihan *bearing* untuk *bearing* penggilang

Nomor bantalan			Ukuran luar (mm)				Kapasitas nominal dinamis spesifik C (kg)	Kapasitas nominal statis spesifik C ₀ (kg)
Jenis terbuka	Dua sekat	Dua sekat tanpa kontak	d	D	B	r		
6000			10	26	8	0,5	360	196
6001	6001ZZ	6001VV	12	28	8	0,5	400	229
6002	02ZZ	02VV	15	32	9	0,5	440	263
6003	6003ZZ	6003VV	17	35	10	0,5	470	296
6004	04ZZ	04VV	20	42	12	1	735	465
6005	05ZZ	05VV	25	47	12	1	790	530
6006	6006ZZ	6006VV	30	55	13	1,5	1030	740
6007	07ZZ	07VV	35	62	14	1,5	1250	915
6008	08ZZ	08VV	40	68	15	1,5	1310	1010
6009	6009ZZ	6009VV	45	75	16	1,5	1640	1320
6010	10ZZ	10VV	50	80	16	1,5	1710	1430
6200	6200ZZ	6200VV	10	30	9	1	400	236
6201	01ZZ	01VV	12	32	10	1	535	305
6202	02ZZ	02VV	15	35	11	1	600	360
6203	6203ZZ	6203VV	17	40	12	1	750	460
6204	04ZZ	04VV	20	47	14	1,5	1000	635
6205	05ZZ	05VV	25	52	15	1,5	1100	730
6206	6206ZZ	6206VV	30	62	16	1,5	1530	1050
6207	07ZZ	07VV	35	72	17	2	2010	1430
6208	08ZZ	08VV	40	80	18	2	2380	1650
6209	6209ZZ	6209VV	45	85	19	2	2570	1880
6210	10ZZ	10VV	50	90	20	2	2750	2100
6300	6300ZZ	6300VV	10	35	11	1	635	365
6301	01ZZ	01VV	12	37	12	1,5	760	450
6302	02ZZ	02VV	15	42	13	1,5	895	545
6303	6303ZZ	6303VV	17	47	14	1,5	1070	660
6304	04ZZ	04VV	20	52	15	2	1250	785
6305	05ZZ	05VV	25	62	17	2	1610	1080
6306	6306ZZ	6306VV	30	72	19	2	2090	1440
6307	07ZZ	07VV	35	80	20	2,5	2620	1840
6308	08ZZ	08VV	40	90	23	2,5	3200	2300
6309	6309ZZ	6309VV	45	100	25	2,5	4150	3100
6310	10ZZ	10VV	50	110	27	3	4850	3650

Tabel 1B Penentuan pembebanan *bearing*

Jenis bantalan	Beban putar pd cincin dalam	Beban putar pada cincin luar	Baris tunggal		Baris ganda				ε	Baris tunggal		Baris ganda	
			$F_a/VF_i > \epsilon$		$F_a/VF_i \leq \epsilon$					$F_a/VF_i > \epsilon$		$F_a/VF_i > \epsilon$	
			X	Y	X	Y	X	Y		X ₀	Y ₀	X ₀	Y ₀
Bantalan bola alur dalam	$F_a/C_0 = 0,014$ = 0,028 = 0,056 = 0,084 = 0,11 = 0,17 = 0,28 = 0,42 = 0,56	1	1,2	0,56	2,30	1,09	0,70	1,63	0,57	0,6	0,5	0,6	0,5
				1,45	1,99	0,92	0,67	1,41	0,68	0,6	0,5	0,6	0,5
				1,31	1,71	0,78	0,63	1,24	0,80	0,5	0,33	1	0,66
				1,15	1,55	0,66	0,60	1,07	0,95	0,29	0,58		
				1,04	1,45	0,55	0,57	0,93	1,14	0,26	0,52		
				1,00	1,31	0,55	0,57	0,93	1,14	0,26	0,52		
				1,00	1,15	0,55	0,57	0,93	1,14	0,26	0,52		
Bantalan bola sudut	$\alpha = 20^\circ$ = 25° = 30° = 35° = 40°	1	1,2	0,43	1,00	1,09	0,70	1,63	0,57	0,6	0,5	0,6	0,5
				0,41	0,87	0,92	0,67	1,41	0,68	0,6	0,5	0,6	0,5
				0,39	0,76	0,78	0,63	1,24	0,80	0,5	0,33	1	0,66
				0,37	0,66	0,66	0,60	1,07	0,95	0,29	0,58		
				0,35	0,57	0,55	0,57	0,93	1,14	0,26	0,52		

LAMPIRAN 4
DATA PERHITUNGAN PROSES BUBUT

LAMPIRAN 4

DATA PERHITUNGAN PROSES BUBUT

Tabel 2A Kecepatan potong proses bubut rata dan proses bubut ulir untuk pahat HSS (Widarto, 2008)

MATERIAL	STRAIGHT TURNING SPEED		THREADING SPEED	
	FEET PER MINUTE	METERS PER MINUTE	FEET PER MINUTE	METERS PER MINUTE
LOW-CARBON STEEL	80-100	24.4-30.5	35-40	10.7-12.2
MEDIUM-CARBON STEEL	60-80	18.3-24.4	25-30	7.6-9.1
HIGH-CARBON STEEL	35-40	10.7-12.2	15-20	4.6-6.1
STAINLESS STEEL	40-50	12.2-15.2	15-20	4.6-6.1
ALUMINUM AND ITS ALLOYS	200-300	61.0-91.4	60-80	15.2-18.3
ORDINARY BRASS AND BRONZE	100-200	30.5-61.0	40-50	12.2-15.2
HIGH-TENSILE BRONZE	40-60	12.2-18.3	20-25	6.1-7.6
CAST IRON	50-80	15.2-24.4	20-25	6.1-7.6
COPPER	60-80	18.3-24.4	20-25	6.1-7.6

NOTE: Speeds for carbide-tipped bits can be 2 to 3 times the speed recommended for high-speed steel

Tabel 2B Kecepatan spindel mesin bubut

	1	2	3
A	60	220	860
B	92	360	1400
C	140	530	2000

LAMPIRAN 5
DATA PERHITUNGAN PROSES GURDI

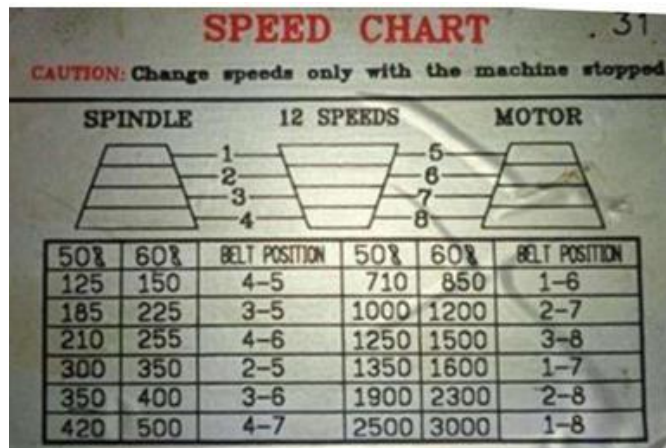
LAMPIRAN 5

DATA PERHITUNGAN PROSES GURDI

Tabel 3A Kecepatan potong untuk proses *frais* untuk pasangan benda kerja dan pisau HSS (Widarto, 2008)

MATERIAL	CUTTING SPEED (sfpm)			
	PLAIN MILLING CUTTERS		END MILLING CUTTERS	
	Roughing	Finishing	Roughing	Finishing
Aluminum.....	400 to 1,000	400 to 1,000	400 to 1,000	400 to 1,000
Brass, composition.....	125 to 200	90 to 200	90 to 150	90 to 150
Brass, yellow.....	150 to 200	100 to 250	100 to 200	100 to 200
Bronze, phosphor and manganese.....	30 to 80	25 to 100	30 to 80	30 to 80
Cast iron (hard).....	25 to 40	10 to 30	25 to 40	20 to 45
Cast iron (soft and medium).....	40 to 75	25 to 80	35 to 65	30 to 80
Monel metal.....	50 to 75	50 to 75	40 to 60	40 to 60
Steel, hard.....	25 to 50	25 to 70	25 to 50	25 to 70
Steel, soft.....	50 to 100	45 to 110	50 to 85	45 to 100

Tabel 3B Putaran mesin



Tabel 3C Tebal beram per gigi untuk beberapa tipe pisau *frais* dan benda kerja yang dikerjakan (inchi) (Widarto, 2008)

TYPE OF CUTTER	ALUMINUM		BRONZE		CAST IRON		FREE MACHINING STEEL		ALLOY STEEL	
	HSS	CAR BIDE	HSS	CAR BIDE	HSS	CAR BIDE	HSS	CAR BIDE	HSS	CAR BIDE
FACE MILLS	.007	.007	.005	.004	.004	.006	.003	.004	.002	.003
	to .022	to .020	to .014	to .012	to .016	to .020	to .012	to .016	to .008	to .014
HELICAL MILLS	.006	.006	.003	.004	.004	.002	.002	.003	.002	.003
	to .018	to .016	to .011	to .010	to .018	to .018	to .010	to .013	to .007	to .012
SIDE CUTTING MILLS	.004	.004	.003	.003	.002	.003	.002	.003	.001	.002
	to .013	to .012	to .008	to .007	to .009	to .012	to .007	to .009	to .005	to .008
END MILLS	.003	.003	.003	.002	.002	.003	.001	.002	.001	.002
	to .011	to .010	to .007	to .006	to .008	to .010	to .006	to .008	to .004	to .007
FORM RELIEVED CUTTERS	.002	.002	.001	.001	.002	.002	.001	.002	.001	.001
	to .007	to .006	to .004	to .004	to .005	to .006	to .004	to .005	to .003	to .004
CIRCULAR SAWS	.002	.002	.001	.001	.001	.002	.001	.001	.005	.001
	to .005	to .005	to .003	to .003	to .004	to .006	to .003	to .004	to .002	to .004

LAMPIRAN 6
DOKUMENTASI UJI HASIL

LAMPIRAN 6
DOKUMENTASI UJI HASIL



LAMPIRAN 7
FULL *ASSEMBLY* MESIN PRODUKSI PELET PAKAN
TERNAK BEBEK

LAMPIRAN 7

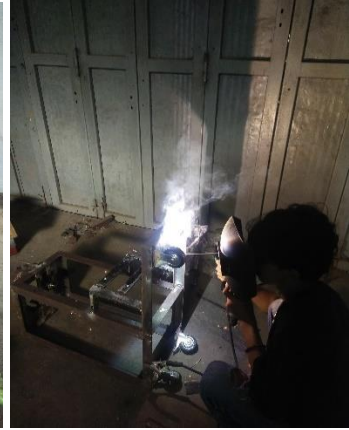
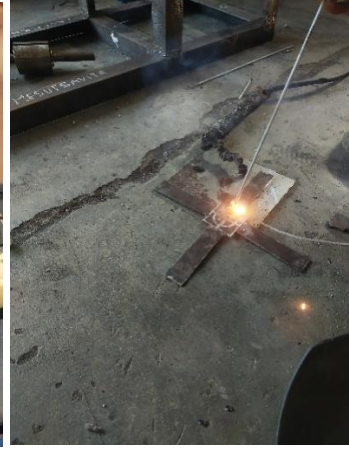
FULL *ASSEMBLY* MESIN PRODUKSI PELET PAKAN TERNAK BEBEK

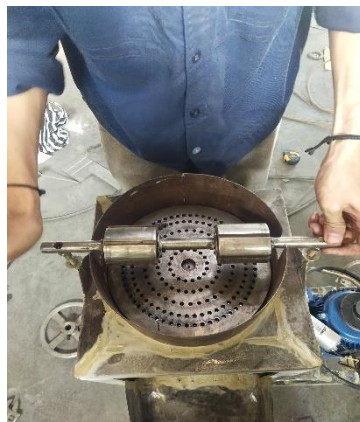


LAMPIRAN 8
DOKUMENTASI PROSES PRODUKSI

LAMPIRAN 8
DOKUMENTASI PROSES PRODUKSI







**RANCANG BANGUN SISTEM PENGGILING DAN UJI
HASIL PADA MESIN PRODUKSI PELET PAKAN
TERNAK BEBEK**

Tugas Akhir

Untuk memenuhi Sebagian persyaratan

Mencapai derajat Ahli Madya Teknik



Diajukan oleh:

RIFKI ADI FAUZANI

210203022

**PROGRAM STUDI DIPLOMA III TEKNIK MESIN
JURUSAN REKAYASA MESIN DAN INDUSTRI PERTANIAN
POLITEKNIK NEGERI CILACAP
KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
RISET, DAN TEKNOLOGI
2024**

$$\left. \begin{array}{c} \square \\ \square \\ \square \end{array} \right\}$$

$$\left\{ \begin{array}{c} 1 \\ 1 \\ 1 \end{array} \right\}$$

$$\left(\begin{array}{c} \square \\ \square \\ \square \end{array} \right)$$