

LAMPIRAN

Lampiran 1

Biodata Penulis



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Hobi : Sepak Bola dan Futsal
Motto : Sabar memang berat karena hadiahnya surga. Kalau gampang, hadiahnya kipas angin.

Riwayat Pendidikan :

Jenjang	Nama Institusi	Jurusan	Lama/Tahun
SD	SD Negeri Kalibenda	-	2008 – 2014
SMP	SMP Negeri 3 Ajibarang	-	2014 – 2017
SMA/SMK	SMK Muhammadiyah 2 Ajibarang	TKR	2017 – 2020
Perguruan Tinggi	Politeknik Negeri Cilacap	D3 Teknik Mesin	2020 – 2023

Lampiran 2

Tabel Proses Produksi

Tabel. Putaran Mesin Bubut (Dokumentasi : Politeknik Negeri Cilacap, 2023)



Tabel. Gerak Makan Pada Mesin Bubut (Dokumentasi : Politeknik Negeri Cilacap, 2023)

		LONGITUDINAL FEED				TRANSVERSE FEED	
		[mm/rev]				[mm/rev]	
		M					
G	⊙	D	E	F	G	⊙	D
15	1	0.044	0.088	0.176	0.352	1	0.02
14	2	0.050	0.099	0.198	0.396	2	0.02
13 1/2	3	0.052	0.105	0.210	0.420	3	0.02
13	4	0.055	0.110	0.220	0.440	4	0.02
12	5	0.060	0.121	0.242	0.484	5	0.02
11 1/2	6	0.063	0.127	0.254	0.508	6	0.02
11	7	0.066	0.132	0.264	0.528	7	0.02
10	8	0.072	0.144	0.287	0.574	8	0.03
9 1/2	9	0.075	0.149	0.298	0.596	9	0.03
9	10	0.077	0.154	0.308	0.616	10	0.03
8	11	0.083	0.166	0.331	0.662	11	0.03

Tabel. Data Material, Kecepatan Potong, Sudut Mata Bor HSS, dan Cairan Pendingin Proses Gurdi (Widato,2008)

MATERIAL	CUTTING SPEEDS v_c		POINT ANGLE	LIP CLEARANCE	COOLANTS
	(METERS/MINUTE) (FEET/MINUTE)				
	MPH	FPM			
Aluminum And Alloys	41.00-91.50	200-300	90-130 deg	12-15 deg	Kerosene/Kerosene & Lard Oil/Soluble Oil
Armor Plate	12.20-18.25	40-50	135-140 deg	4-9 deg	Light Machine Oil
Brass	41.00-91.50	200-300	118-118 deg	12-15 deg	Dry/Soluble Oil/Kerosene/Lard Oil
Brone	41.00-91.50	200-300	118-118 deg	12-15 deg	Dry/Soluble Oil/Mineral Oil/Lard Oil
Brone, High Tensile	21.25-45.75	70-150	100-110 deg	12-15 deg	Dry/Soluble Oil/Mineral Oil/Lard Oil
Cast Iron, Soft	28.50-45.75	100-150	90-100 deg	12-15 deg	Air Jet Dry/Soluble Oil
Cast Iron, Medium	21.25-38.50	70-100	100-110 deg	12-15 deg	Air Jet Dry/Soluble Oil
Cast Iron, Hard	21.25-30.50	70-100	100-118 deg	8-12 deg	Air Jet Dry/Soluble Oil
Cast Iron, Chilled	9.15-12.20	30-40	118-125 deg	5-9 deg	Air Jet Dry/Soluble Oil
Copper	61.00-91.50	200-300	100-118 deg	12-15 deg	Air Jet Dry/Soluble Oil
Copper Graphite Alloy (Carbon Drill)	38.20-21.25	60-70	**,**	**,**	Soluble Oil/Dry/Mineral Oil/Kerosene
Glass (Carbon Drill)	4.00-9.15	20-30	**,**	**,**	Soluble Oil/Dry/Mineral Oil/Kerosene
Iron, Malleable	15.25-27.45	50-90	90-100 deg	12-15 deg	Light Machine Oil
Magnesium And Alloys	16.25-122.0	250-400	70-118 deg	12-15 deg	Soluble Oil
Monel Nickel	4.15-15.20	30-50	118-125 deg	10-12 deg	Compressed Air/Mineral Oil
Nickel Alloys	12.20-18.20	40-60	135-140 deg	5-7 deg	Lard Oil/Soluble Oil
Plastic, Hot Set	38.50-91.50	100-300	60-90 deg	10-12 deg	Lard Oil/Soluble Oil
Plastic, Cold Set	38.50-91.50	100-300	118-125 deg	12-20 deg	Soap Solution
Steel, Low Carbon, 0.1-0.3%	24.40-33.25	80-110	118-118 deg	7-9 deg	Soap Solution
Steel, Medium Carbon, 0.4-0.5%	21.25-24.40	70-80	118-125 deg	7-9 deg	Soluble Oil/Mineral Oil/Sulfur Oil/Lard Oil
Steel (High Carbon 1.2%)	15.25-18.20	50-60	118-145 deg	7-9 deg	Soluble Oil/Mineral Oil/Sulfur Oil/Lard Oil
Steel, Forged	15.25-18.20	50-60	118-145 deg	7-12 deg	Soluble Oil/Mineral Oil/Sulfur Oil/Lard Oil
Steel, Alloy	15.25-21.25	50-70	118-125 deg	10-12 deg	Mineral Lard Oil
Steel, Alloy 300 To 400 Brand	6.10-9.15	20-30	130-140 deg	7-10 deg	Soluble Oil
Steel, Stainless, Free Machining	9.15-24.40	30-80	110-118 deg	8-12 deg	Soluble Oil
Steel, Stainless, Hard	4.15-15.25	15-50	118-125 deg	4-8 deg	Soluble Oil
Steel, Manganese	3.66-4.57	12-15	140-150 deg	7-10 deg	Soluble Oil
Stone (Carbide Drill)	7.62-9.15	25-30	**,**	**,**	Water Solution
Wood	91.50-122.2	200-400	60-70 deg	10-15 deg	Dry

Tabel. Rumus Empiris Gerakan per Mata Potong Gurdi (Widarto, 2008)

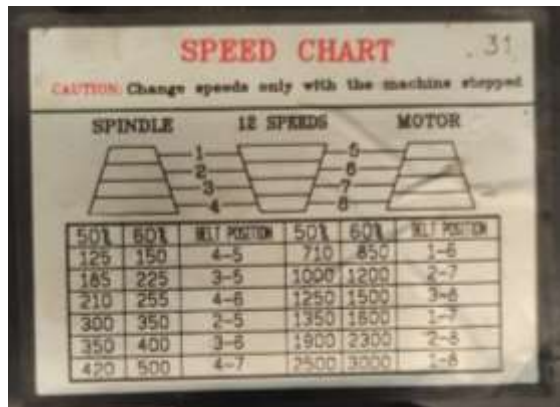
- Untuk baja

$$f = 0,084\sqrt[3]{d}; mm / put \dots \dots \dots (8.2)$$

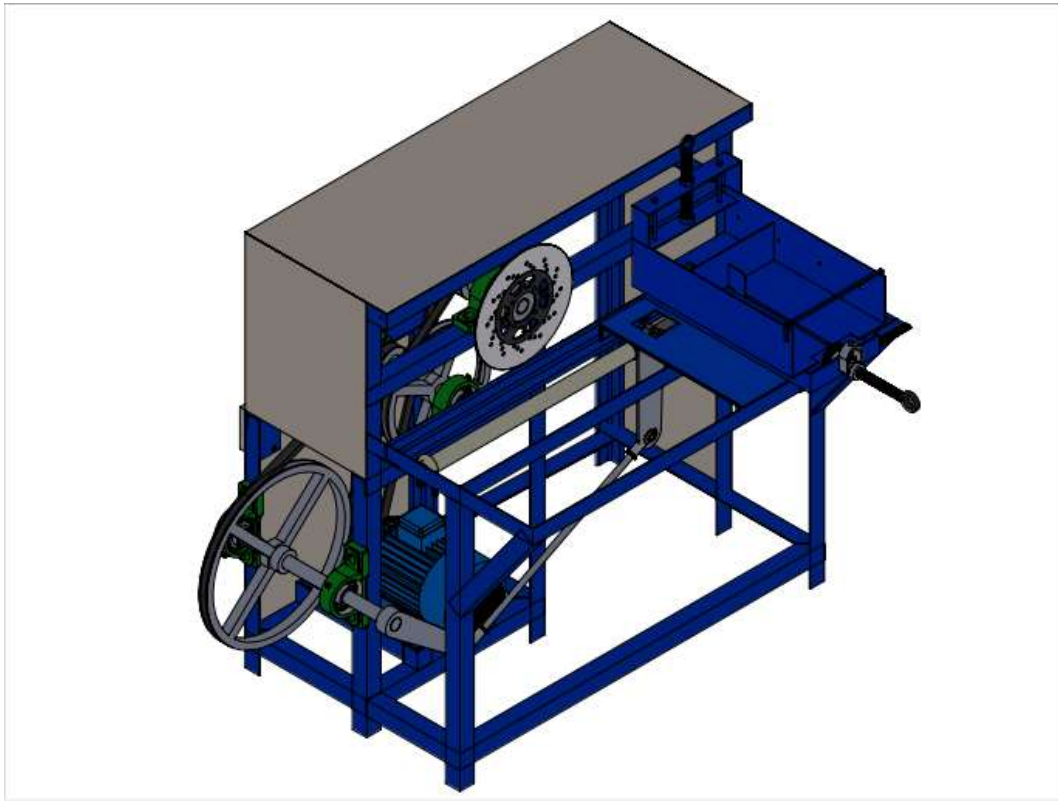
- Untuk besi tuang

$$f = 0,1\sqrt[3]{d}; mm / put \dots \dots \dots (8.3)$$

Tabel. Putaran Mesin Bor (Dokumentasi : Politeknik Negeri Cilacap, 2023)



Lampiran 3
Desain Mesin Pengiris Tempe



Lampiran 4

Dokumentasi Proses Produksi



Gambar 4A Proses pemotongan



Gambar 4B Proses pengelasan



Gambar 4C Proses gurdi dan bubut



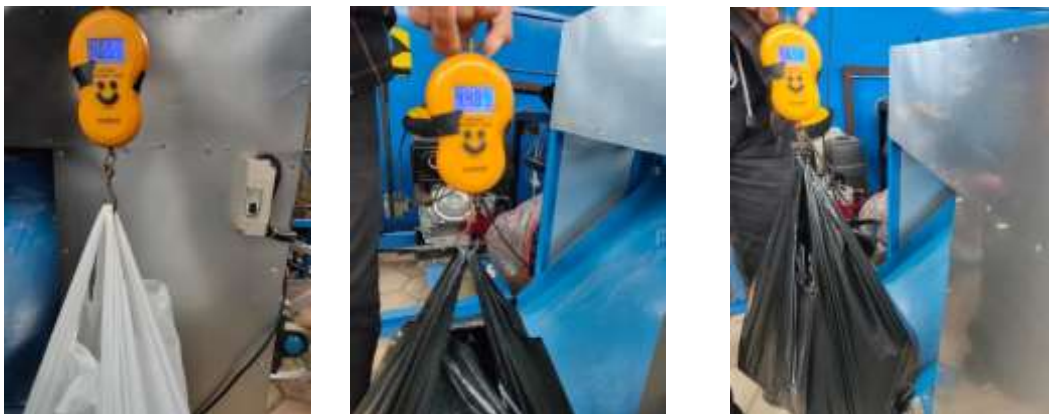
Gambar 4D Pengecatan

Lampiran 5

Dokumentasi Uji Hasil



Gambar 5A Tempe sebelum di iris



Gambar 5B Hasil timbangan sebelum tempe di iris



Gambar 5C Hasil timbangan tempe yang bagus



Gambar 5D Hasil timbangan tempe yang gagal



Gambar 5E Pengukuran diameter tempe



Gambar 5F Waktu proses pengirisan



Gambar 5G Hasil irisan tempe