

## Lampiran I

Tabel kedalaman pemakanan ( $f_z$ )

Material	End mill Face Cutting Depth Max 6 mm			Shell End Mill Face Mill	Form Cutter	Sloting & Side Mill
	< 12	12-25	>25			
Diameter (mm)	< 12	12-25	>25	>40	-	-
Plain carbon steel	0.025	0.075	0.1	0.1-0.3	0.125	0.05-0.2
Alloy Steel	0.025	0.05	0.075	0.1-0.3	0.1	0.05-0.2
Tool Steel CS 18-25 m/mnt	0.025	0.05	0.05	0.075-0.25	0.1	0.05-0.15
Tool Steel CS 05-17 m/mnt	0.025	0.05	0.05	0.075-0.2	0.075	0.05-0.125
Spring Steel	0.025	0.05	0.05	0.075-0.2	0.075	0.05-0.125
Stainless Steel						
304, 304L, 316, 316L	0.025	0.05	0.075	0.125-0.2	0.1	0.05-0.175
410, 416	0.025	0.05	0.075	0.1-0.15	0.1	0.05-0.175
420, 420F	0.025	0.05	0.05	0.075-0.5	0.075	0.05-0.175
440C, 440F	0.013	0.05	0.05	0.05-0.15	0.075	0.05-0.125
Copper	0.05	0.1	0.125	0.1-0.5	0.1	0.05-0.25
Lead Bronze	0.05	0.1	0.125	0.1-0.5	0.1	0.05-0.25
Phospor Bronze	0.05	0.075	0.1	0.075-0.3	0.1	0.05-0.2
Pure Aluminum	0.075	0.1	0.125	0.125-0.5	0.125	0.1-0.3
Aluminum Alloy	0.05	0.075	0.1	0.125-0.5	0.1	0.1-0.3
Cast Iron						
GG20,25	0.025	0.075	0.1	0.125-0.4	0.125	0.05-0.25
GG30,35,40,45,50	0.025	0.05	0.075	0.1-0.3	0.1	0.05-0.2
GG55,60	0.025	0.05	0.05	0.05-0.2	0.075	0.05-0.125

Sumber: (Pusztai, 1983).

## Lampiran II

Tabel kecepatan potong ( $V_c$ )

Bahan	Cutter HSS		Cutter Karbida	
	Halus	kasar	Halus	kasar
Baja Perkakas	75 - 100	25 - 45	185 - 230	110 - 140
Baja Karbon Rendah	70 - 90	25 - 40	170 - 215	90 - 120
Baja karbon Menengah	60 - 85	20 - 40	140 - 185	75 - 110
Besi Cor Kelabu	40 - 45	25 - 30	110 - 140	60 - 75
Kuningan	85 - 110	45 - 70	185 - 215	120 - 150
Alumunium	70 - 110	30 - 45	140 - 215	60 - 90

Sumber: (Pusztai, 1983).

### **Lampiran III**

#### *G-code proses Center drill*

(10. CENTER DRILL TOOL - 7 DIA. OFF. - 7 LEN. - 7 DIA. - 10.)

N1622T7M6

N1624G0G90G54X-165.5Y-60.A0.S1145M3

N1626G43H7Z25.

N1628G98G81Z-2.R2.F114.5

N1630X-15.Y60.

N1632G80

N1634M5

N1636G91G28Z0.

N1638G28X0.Y0.A0.

N1640M01

### **Lampiran VI**

#### *G-code proses Drill*

(10. DRILL TOOL - 8 DIA. OFF. - 8 LEN. - 8 DIA. - 10.)

N1642T8M6

N1644G0G90G54X-165.5Y-60.A0.S1145M3

N1646G43H8Z25.

N1648G98G81Z-55.004R2.F600.

N1650X-15.Y60.

N1652G80

N1654M5

N1656G91G28Z0.

N1658G28X0.Y0.A0.

N1660M01