MACHINING CONDITIONS

SPMT 060304 TN LT 30

FM003100

Material Group		Lamina Group	Material Example	Hardness	D.O.C		Feed		Vc		Advised D.O.C	Advised Feed	Advised Vc
					min[mm]	max[mm]	min[mm/t]	max[mm/t]	min[m/min]	max [m/min]	[mm]	[mm/t]	[m/min]
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	6	0.06	0.12	190	330	2.4	0.1	250
				190 HB	0.3	6	0.06	0.1	190	300	2.4	0.08	220
				250 HB	0.3	6	0.06	0.1	190	250	2.4	0.08	200
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	230 HB	0.3	6	0.06	0.1	150	210	2.4	0.08	180
				280 HB	0.3	6	0.05	0.1	130	190	2.4	0.08	150
				180 HB	0.3	6	0.06	0.12	150	240	2.4	0.1	200
				350 HB	0.3	6	0.05	0.1	130	170	2.4	0.08	140
	High Alloyed	3	X40CrM0V5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	6	0.06	0.08	90	150	1.8	0.07	130
				280 HB	0.3	6	0.05	0.1	90	130	1.8	0.08	120
				320 HB	0.3	6	0.05	0.08	60	110	1.8	0.06	100
				350 HB	0.3	6	0.05	0.08	60	90	1.8	0.06	80
Stainless Steel	Austentic	4	304, 316, X5CrNi18-9	180 HB	0.3	6	0.06	0.08	190	250	2.4	0.07	220
				240 HB	0.3	6	0.05	0.08	160	210	2.4	0.07	190
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.3	6	0.05	0.08	70	130	1.8	0.07	100
				310 HB	0.3	6	0.05	0.07	70	120	1.8	0.06	90
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	6	0.05	0.08	150	210	2.4	0.07	190
				42 HRc	0.3	6	0.05	0.07	90	150	1.8	0.06	130
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, N030B	150 HB	0.3	6	0.05	0.14	150	240	2.4	0.12	200
				200 HB	0.3	6	0.05	0.12	150	220	2.4	0.1	180
				250 HB	0.3	6	0.05	0.12	150	190	2.4	0.1	160
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.3	6	0.05	0.14	100	200	2.4	0.12	180
				200 HB	0.3	6	0.05	0.12	100	180	2.4	0.1	150
				250 HB	0.3	6	0.05	0.12	100	150	2.4	0.1	130
NiTi Alloy	Fe, Ni & Co Based	9	Incoloy 800	240 HB	0.3	6	0.04	0.08	30	50	1.8	0.06	32
			Inconel 700	250 HB	0.3	6	0.04	0.08	30	50	1.8	0.06	30
			Stellite 21	350 HB	0.3	6	0.04	0.08	30	50	1.8	0.06	30
	Ti Based	10	T40	-	0.3	6	0.04	0.08	30	60	1.8	0.06	40
			TiAl6V4	-	0.3	6	0.04	0.08	40	70	1.8	0.06	55
Hardened Materials	Steel Chilled Cast Iron White Cast Iron	11	G-X300CrMo15	55 HRc	0.3	6	0.04	0.06	30	60	0.6	0.05	40
			Ni-Hard 2	400 HB	0.3	6	0.04	0.06	40	80	0.9	0.05	50
			X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	6	0.04	0.1	40	80	1.2	0.08	60
				50 HRc	0.3	6	0.04	0.08	40	70	0.9	0.06	55
				55 HRc	0.3	6	0.04	0.06	40	60	0.6	0.05	50
Aluminium	Al (>8%Si)	12	AlSi12	130 HB	0.3	6	0.08	0.14	200	400	2.4	0.12	280