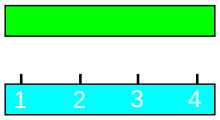
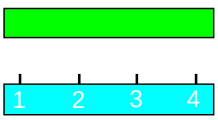
DBMT 060404 L-NN

Material grpoup	Group No	Material Examples	Hardness Brinell	d.o.c [mm] min	d.o.c [mm] max	feed [mm/t] min	feed [mm/t] max	A max [mm2]	Vc [m/min] min	Vc [m/min] max	Recommanded point d.o.c	Recommanded point feed
Low carbon Steel	1	XC 12 S 250 Pb	150	0.2	3	0.11	0.23	0.6	180	400	0.5 to 2	0.18
			180		2.5		0.2	0.48		350		
			210		2.5		0.18	0.48		200		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.2	2.5	0.11	0.2	0.48	120	300	0.5 to 1.5	0.15
			230		2.5		0.2	0.4		250		
			280		2	0.1	0.18	0.4		210		
			320		2		0.16	0.32		180		
High alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.2	2.5	0.09	0.18	0.4	70	190	0.5 to 1.5	0.12
			280		2.5		0.16	0.4		150		
			320		2		0.14	0.28		130		
			350		2		0.14	0.24		100		
Austenitic Stainless Steel	4	303 / 304 304 L	Annealed	0.2	2.5	0.1	0.18	0.32	170	270	0.5 to 2	0.15
	5	316 / 316 L	Annealed		2	0.09	0.16	0.24	120	210	0.5 to 2	0.12
	6	316 Ti 630 (F16PH)	Annealed		2	0.09	0.14	0.2	70	120	0.5 to 2	0.12
Ferritic Stainless Steel	7	430 / 439 444	Annealed	0.2	2	0.11	0.18	0.28	170	250	1 to 2.5	0.15
Martensitic Stainless Steel	8	410 / 420	Annealed	0.2	2	0.11	0.18	0.28	170	250	1 to 2.5	0.15
			Treated						120	210		
Grey Cast Iron	9	EN - GJL 200	140 à 230	0.2	3	0.08	0.2	0.64	170	280	0.5 to 2	0.18
		EN - GJL 250						0.6		250		
		EN - GJL 300						0.6		230		
Nodular Cast Iron	10	EN - GJS 400	210	0.2	2.5	0.08	0.18	0.48	120	230	0.5 to 2	0.15
		EN - GJS 600	260					0.4		190		
		EN - GJS 800	310					0.4		150		
Aluminum		Si < 4%	---------	----	----	----	----	----	----	----	----	----
		4% < Si < 9%										
		Si > 9%										
Nickel based Alloys		Inconle 625	--------	0.25	2	0.1	0.16	0.24	25	35	0.5 to 1.5	0.12
		Inconel 718	--------					0.24	28	40		
		Hastelloy C	--------					0.28	40	65		
Titanium based Alloys		TiAl 6 V4	--------	0.25	2	0.1	0.16	0.28	35	60	0.5 to 1.5	0.14
		T40	--------				0.14	0.24	28	40		0.12

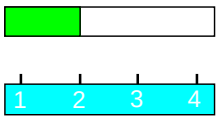
Super finishing



Finishing

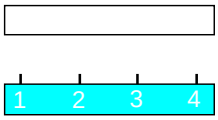


Semi-finishing



Roughing

Interrupted cut



Conclusions:

Super finishing	excellent for the application
Finishing	excellent for the application
Semi-finishing	acceptable for the application
Roughing	not recommended
Interrupted cut	not recommended