Lab 09 Introduction to milling machine and perform face milling to calculate the machining time.

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length of workpiece (L)	=	95	mm	LC=0.05mm, depth=1mm
Width of workpiece (w)	=	50	mm	La=2mm, Lo=2mm
Number of teeths (n_t)	=	4	mm	HSS(High Speed Steel)
Diameter of tool (D)	=	8	mm	
Approach and Overtravel length (Lc)=La+Lo	=	4	mm	

Sr. No	RPM (N) rev/min	Cutting Speed Vc=pi*D*N mm/min	Feed f mm/rev	Feed rate fr=f*nt*N mm/min	Theoritical Machining time Ttheo=(L+Lc)/fr min	Actual machining time Tactual second	Actual machining time Tactual min	Percentage Difference (Ttheo-Tact)/(Tact)*100% min
1	450	11309.73355	8	14400	0.00375	39	0.65	99.42%
2	450	11309.73355	8	14400	0.00375	22	0.366666667	98.98%
3	450	11309.73355	8	14400	0.00375	29	0.483333333	99.22%

Comment:

Error Due to Manual feed as compared to Automated feed.

We took, L=W for Ttheo, Why because, L is that length we did machining in this case, we will take L=W, 50mm.

Feed is the diameter of the tool in this case.