

**MACHINABILITY OF AISI 4340 STEEL WITH ALUMINA BASED  
CERAMIC CUTTING TOOLS**

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**Abstract:** *The machinability of AISI 4340 steel with alumina based ceramic cutting tools is discussed in this paper. In the present work, four types of advanced alumina based ceramic cutting tools are used. The machinability of AISI 4340 steel was evaluated by measurement of flank wear of the cutting tool inserts and surface finish of the turned work pieces. The Ti[C, N] mixed alumina ceramic cutting tools performed better on machining AISI 4340 steel.*

**Key words:** *Machinability, cutting tool, alumina, flank wear, surface finish.*