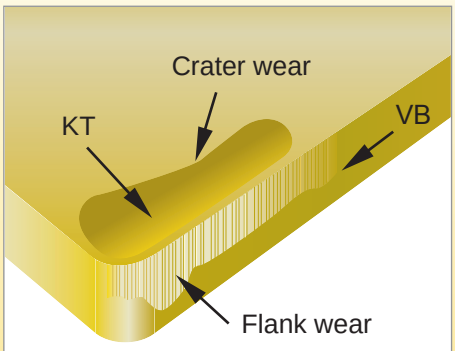
STELLRAM

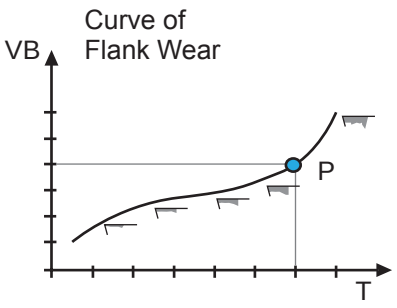
Types of Wear



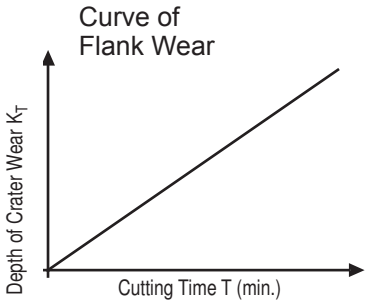
VB= Width of flank wear

KT= Depth of crater wear

Trend of Crater and Flank Wear Based on Cutting Time



P= Point where sudden wear starts and the limit of normal and safe use



Crater wear is more progressive and does not have a sudden breakdown

Factors that could Influence the Tool Life

Tool life depends on many factors, including the type of clamp, type of coolant, (percentage of mix) and type of machine tool. Following, you will see how the surface speed and other data can influence tool life.

Chart “A” below, shows how a different surface speed (Vc) can influence the tool life of the insert. The higher the Vc, the lower the acceptable time life is where V1>V2>V3>V4 you can see respectively that T4>T3>T2>T1.

Chart “B” shows how the wear is influenced by the higher machining data.

Tool Life Criteria

We change the insert when

- It does not create the requested finish or tolerances.
- When the wear under the cutting edge line is too high, causing premature failure
- When the crater depth on the insert face is excessive, causing premature failure
- When the power consumption increases suddenly during the cut

Chart A

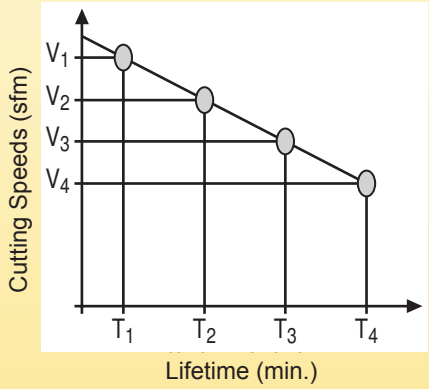


Chart B

