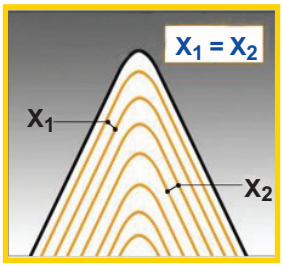
VARDEX Tips 14

Types of Passes

December 2006

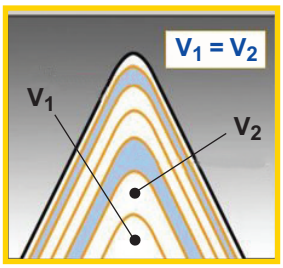
Tip 1 — Thread turning - CONSTANT DEPTH chip method

- The insert cuts a constant depth (X_1,X_2…) in each pass
- The high load on the last passes reduces the tool life
- Easy to program the machine
- As the insert advances, more material is removed. As a result, the load on the cutting edge is increased
- Not recommended



Tip 2 — Thread turning - CONSTANT VOLUME chip method

- The insert removes the same amount of material (V_1, V_2…) in each pass
- The load on the cutting edge is constant
- Tool life is improved in comparison to constant depth chip method
- Since each pass removes the identical volume, the first pass requires a deeper cut. This sometimes causes a higher load on the first pass



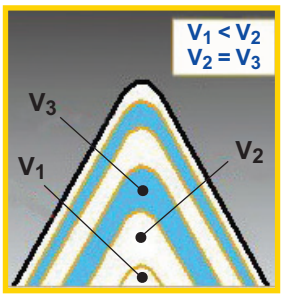
Tip 3 — Thread turning - MODIFIED VOLUME chip method

Recommended!

- Modified constant volume chip passes uses the same principle as the constant volume method, except that the first pass uses a smaller depth of cut (smaller volume)

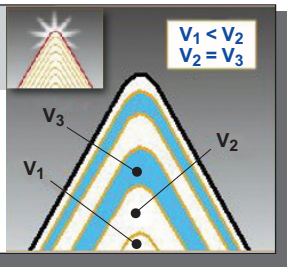
Advantages:

- Constant load on all passes
- No overload on the first pass
- Improved tool life



One Final Tip — Super finish - Zero cut

- One or two additional passes taken at the same position as the final pass can provide improved surface finish



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