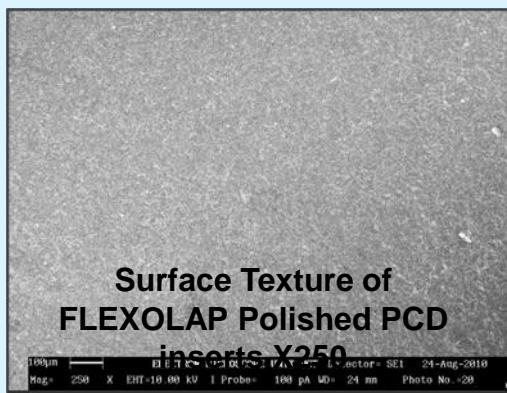
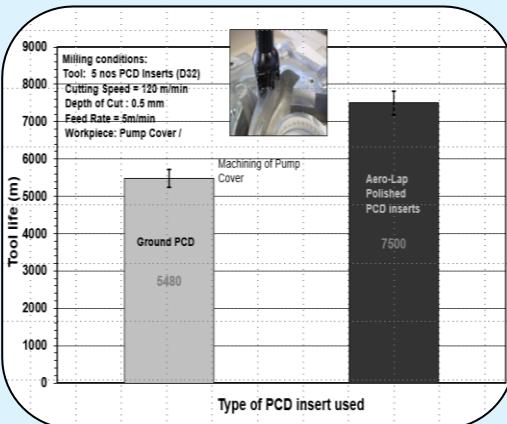


Surface Texture of Un-Polished PCD inserts X250



Surface Texture of FLEXOLAP Polished PCD inserts X250



PCD Tool Life Improvement of FLEXOLAP POLISHED PCD Inserts on Pump housing

WZL-AMS (Advanced Manufacturing Solutions) Pte Ltd has been established by Industry/Research expert after gaining 34 years of Industry/Research/ Academic experience in the field of Advanced Manufacturing. The WZL-AMS offer technology training to enhance the competitiveness of the Industrial workforce. The training programs was nurtured, in close partnership with the WZL Germany. The training would power up the practicing engineers to apply the manufacturing-sciences based approach for resolving the manufacturing challenges and promote a significant cost savings.

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WZL-Advanced Manufacturing Solution

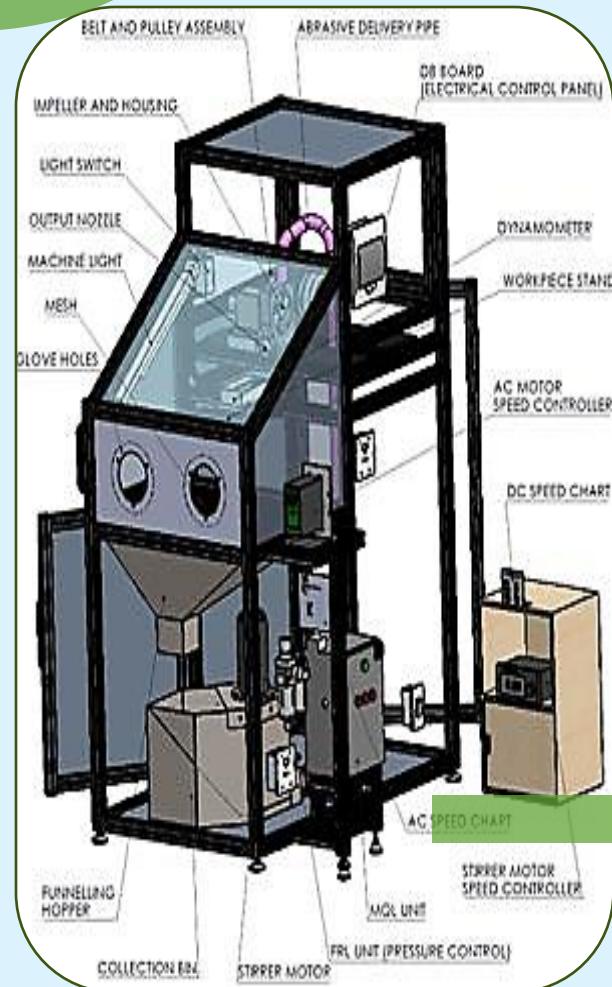
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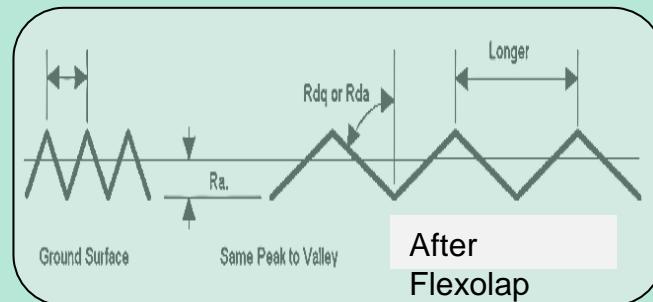
FLEXOLAP80 Nanometric Polishing Machine



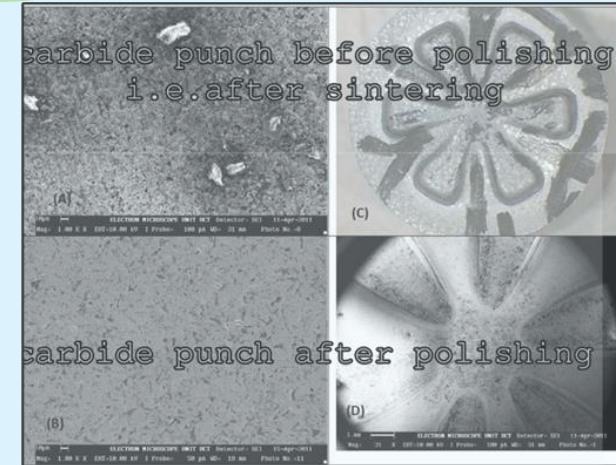


- ❑ Flexolap80 - Max. Work Piece size 300x300mm
- ❑ The Flexolap80 makes it possible to achieve a mirror finish on any profile.
- ❑ Components that used to be polished by hand over many hours, can now be lapped in minutes.
- ❑ The shape and geometry of the component is not altered.
- ❑ Easy lapping of complex profiles.

- ❖ The Flexolap process is a fine process that works best on hard materials.
- ❖ It removes a small amount of material completely replacing the surface texture as shown (NTS):



- ❖ The measured Ra value is often halved or further reduced after Flexolap
- ❖ The shallower slope reflects light better to give a “shiny” finish.
- ❖ The broad peaks of the shallower slope makes a more hard wearing and longer lasting surface.



TUNGSTEN CARBIDE PUNCH BEFORE AND AFTER FLEXOLAP POLISHING



A RAND5 COIN WAS POLISHED AT HIGH VELOCITY AND HIGH WETNESS FOR 5 MINUTES AND SURFACE ROUGHNESS (R_a) DECREASED FROM $0.34\mu m$ TO $0.075\mu m$