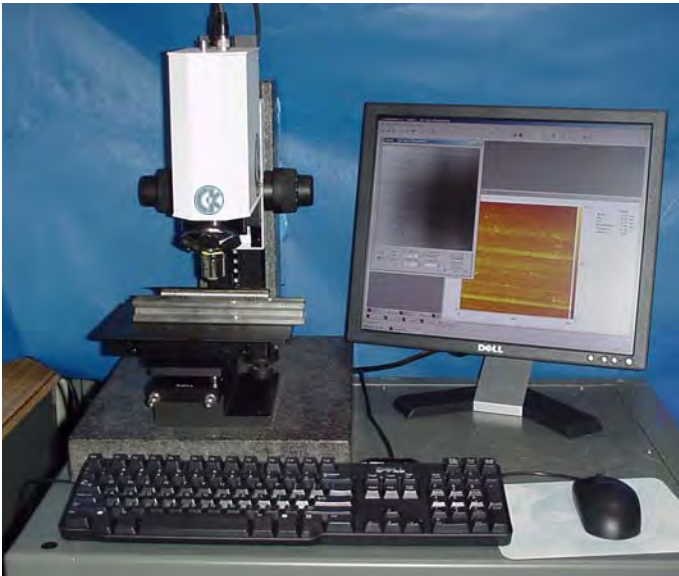


SEE 3-D[®] a Three-Dimensional Surface Evaluation Equipment

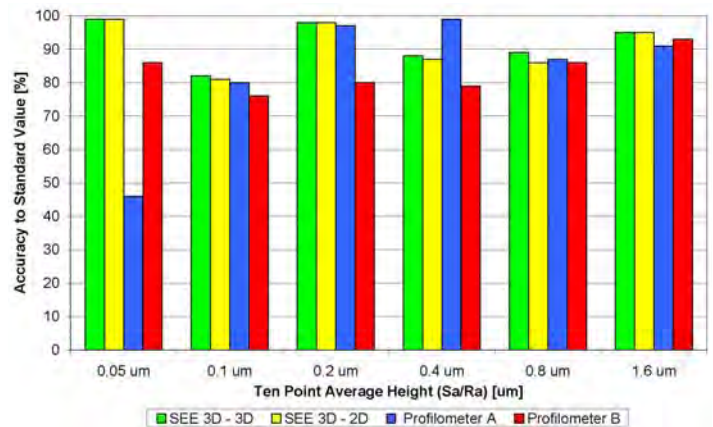


SEE 3-D[®] Analyzer System

Advantages:

- Easy to use
- Practical system for production floor use by production operator
- Measures top ring turnaround wear up to 100µm as well as full bore length
- 3-D surface data is more predictive of wear patterns than 2-D data
- 3-D surface data more accurately shows voids that can be the cause of increased oil consumption
- Accurately measures hone line angle
- Measures more than 30 surface characteristics including Birmingham 14 parameters
- Minimal setup time
- No possibility of probe damage
- Samples are storable indefinitely and available for analysis at any time

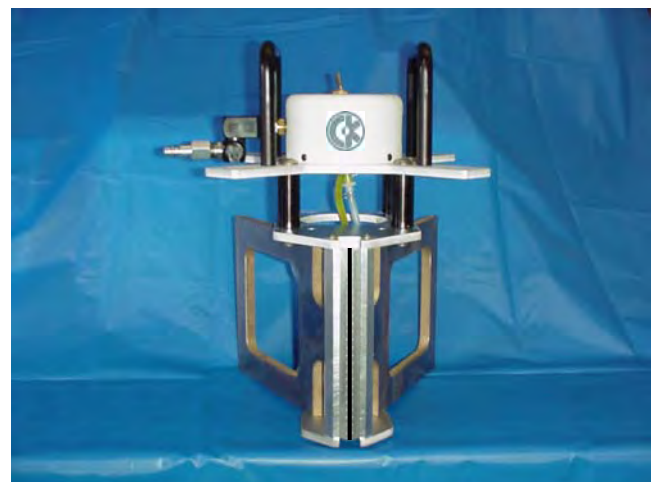
Accuracy of Various Surface Measuring Equipment



What does your cylinder's surface finish really look like?

Are you sure the entire cylinder meets your specifications?

C-K Engineering has developed the *SEE 3-D[®]* system to answer these questions. By utilizing a unique two-part silicon rubber compound, *SEE 3-D[®]* makes a highly accurate 3-D copy of the cylinder's surface. This replicate can then be scanned by a non-contact surface analyzer to produce all the vital surface finish data you need. Simple easy to understand data outputs show clearly the data you need, which helps you better control your machining process and produce the best possible product.

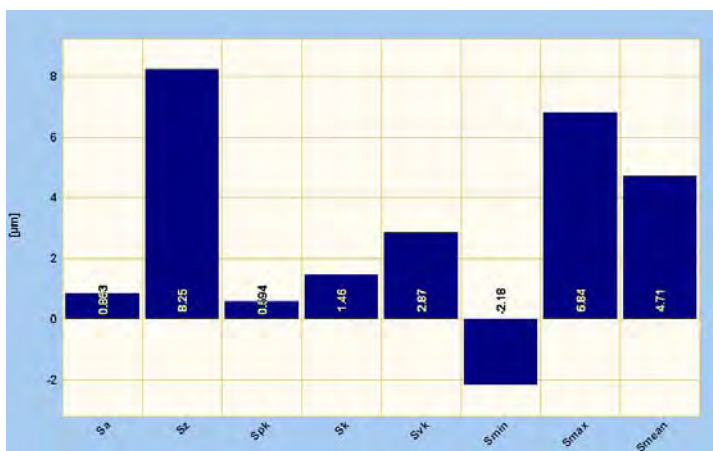
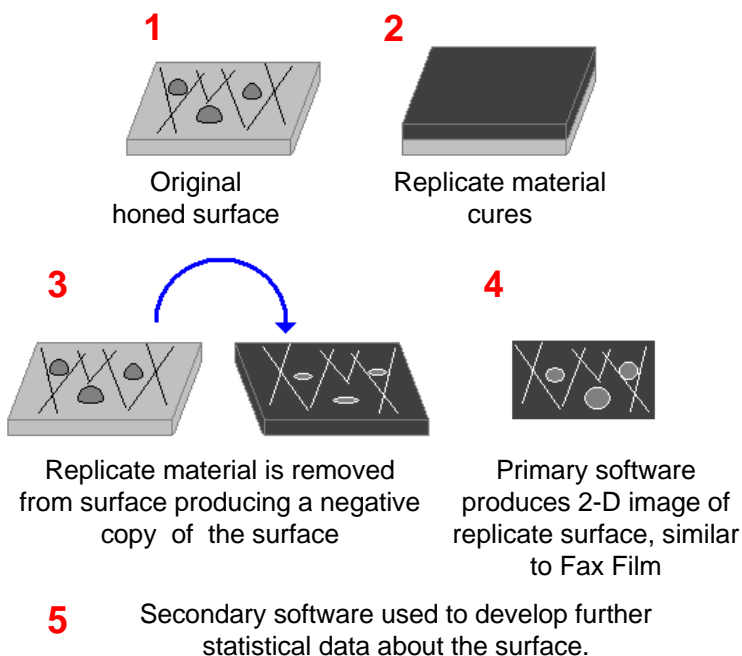


SEE 3-D[®] a

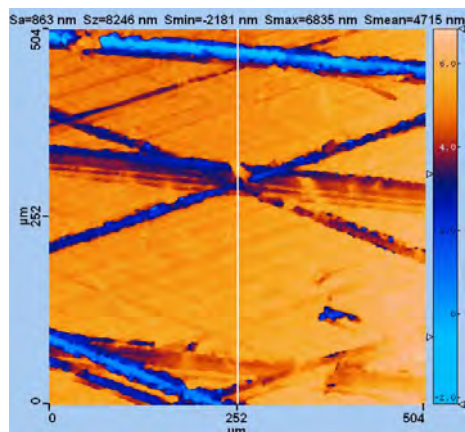
Features:

- Accurately reproduces cylinder bore surface finish and wear pattern
- Provides two-dimensional data including R_a , R_K , R_{PK} , & R_{VK}
- Quantifies 35 different 3-D parameters including S_a , S_K , S_{PK} , & S_{VK} , S_{CI} , S_{BI}
- Measures bores 75-254mm (2.95-10") diameter; full bore length
- Fully integrated system – hardware, software, and analyzer
- The most technologically advanced system of its kind

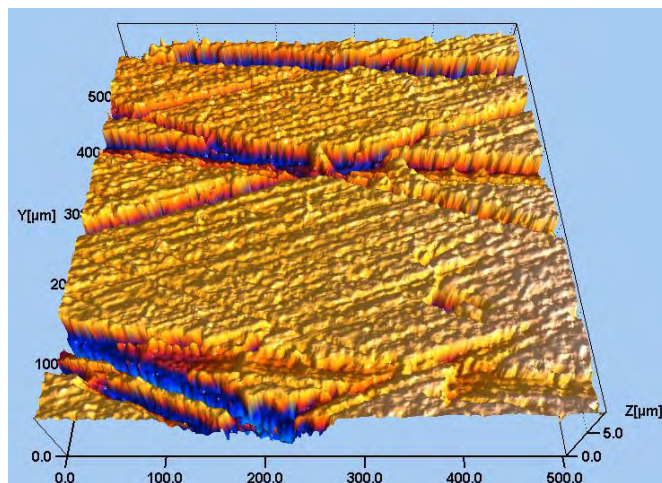
Replication Process



Software Output



Software Output



Software Output

Definitions

S_{CI} – Core Fluid Retention Index indicates the core void volume in the core zone for fluid retention

S_{BI} – Surface Bearing Index indicates bearing property of the portion being examined

For additional information on this and other gage designs, please contact us at:

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