Granite in Metrology

Why Choose Granite for Machine Bases and Metrology Components?

Granite, a type of igneous rock was formed in the Earth millions of years ago. The composition of igneous rock contained many minerals such as quartz that are extremely hard and wear resistant. In addition to hardness and wear resistance granite has approximately half the co-efficient of expansion as iron. It is non-magnetic and will not rust. Its volumetric weight is approximately one third that of iron.

Granite is far more cost effective, cut surfaces can be exceptionally flat. Not only can it be hand lapped to achieve extremes of accuracy but reconditioning can be performed without moving the plate or table off-site. It is entirely a hand lapping operation and generally costs much less than re-conditioning a cast iron alternative.

These qualities make granite the ideal material to create custom-size and custom-design machine bases and metrology components.

Advantages of Granite Surface Plates

If scratched it will not burr and therefore the plane of the surface is unaffected and will retain its accuracy longer than conventional surfaces.

The surface is a continuous plane, not a series of bearing points, thus giving 2-3 times the life of other materials.

Will not rust or be affected by chemical action. Provides a smooth non-wringing surface over which instruments will easily move.

Has a low coefficient of expansion and is therefore less affected by temperature change. This coupled with the natural rigidity of the stone results in unequally.

Granite components are easy to clean.

Can be resurfaced to original accuracy at low cost and quick turnaround.

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