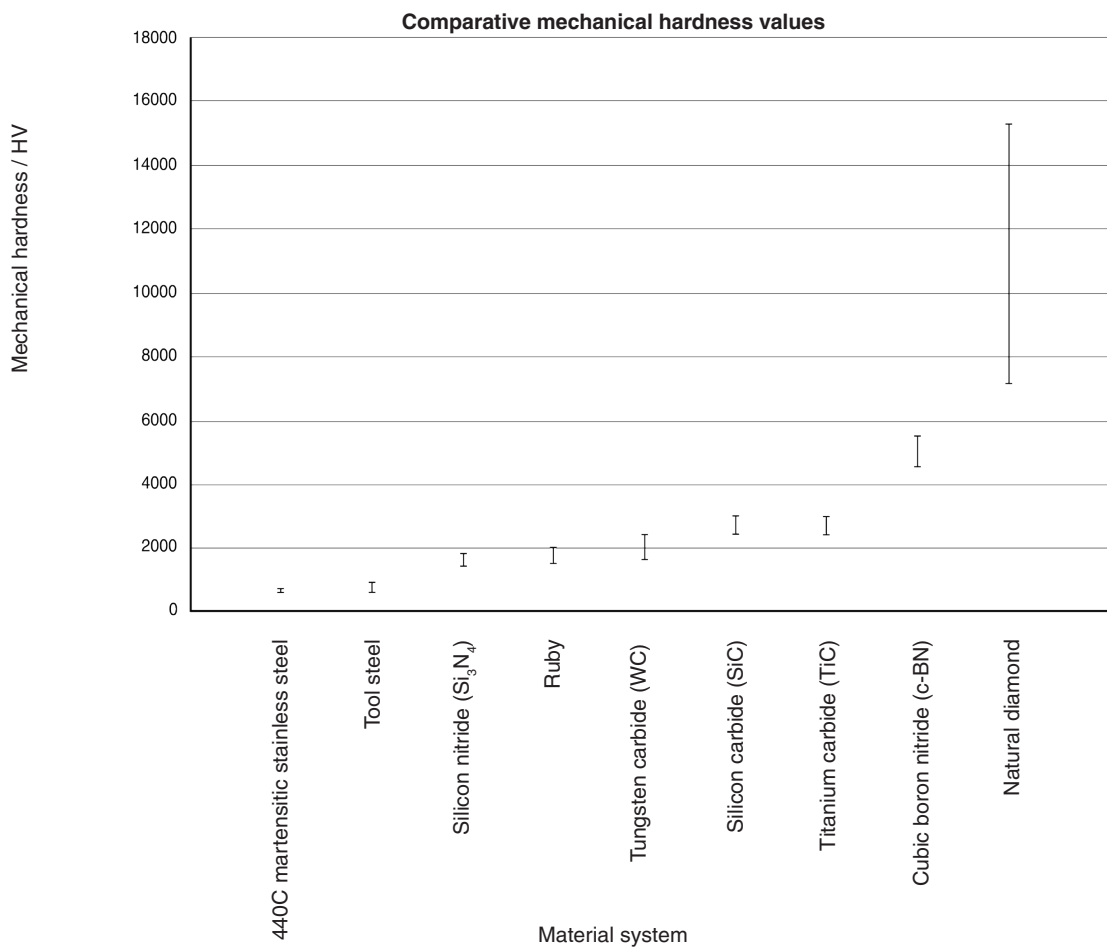


Mechanical hardness evaluation of Renishaw OPTiMUM™ diamond styli

As diamond is one of the hardest materials in existence, measuring the hardness is traditionally very difficult. To overcome this Renishaw utilised nano-indentation. This method uses an indenter with an applied force of just 100 nN (equivalent to a weight of 0.00001g).

The resulting average hardness derived from this method was 10,500 HV.



This corresponds with the hardness of solid, natural diamond and is significantly harder than most common manufacturing materials. This exceptional hardness is a key reason why OPTiMUM diamond styli are the most robust scanning materials available.



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