

【Question】



I am threading a M12 × 1.5 bolt that has a special head shape and I need to cut the screw thread on a lathe. Even though the die cuts a thread, it seems the thread size is always incorrect and the nut will not fit the bolt. The thread was processed with an adjustable die and when I adjust the die the threads dimension is still too big. It seems the finished external threading process is not done correctly.

【Answer】

I think that the die used for external threading is an adjustable die with an adjustment screw. The adjustment screw of the threading die has the function to make the thread size smaller but there is no function to forcibly decrease the die's thread diameter beyond the minimum adjustable diameter. Therefore, I think the die is distorting from the adjusting screw slot and causing the thread to be cut oversize. I think you can do a much better job of external threading with our new die Solid Die: D. It will not spread wider like an adjustable die.



【Explanation】

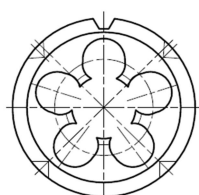
The Solid Die: D, can reliably cut an external thread unlike an adjustable dies because it is an integral type die without an adjusting slot. Therefore, the Solid Die: D is the most suitable die for external threading. All Solid Die: D's have a dimensional accuracy established by YAMAWA, so the external thread is created in a more accurate and stable manner. The Solid Die: D has a much smaller outside diameter that offers less surface distortion when compared to adjustable dies. The cutting tool material used for the Solid Die: D is a HSS (high speed tool steel) that increases tool life performance over adjustable threading dies. In the figure to the right, I described a simple performance comparison between Solid Die: D and



Solid die: D

Solid die: D

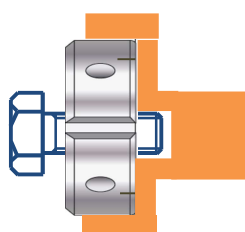
There is no adjusting slot. So, it does not spread.



Less distortion of the thread diameter.

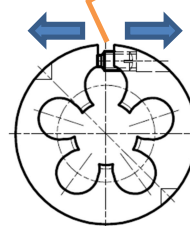


Low surface distortion.



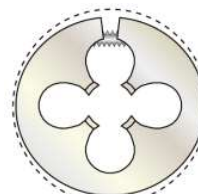
Adjustable type die (adjustable dies)

Adjusting



It has an adjusting slot. So, it spreads easily.

Distortion of the thread diameter is likely to occur.



It is easy to distort the surface.

