Readme file for single point external threading tables

The compound slide must be set to the desired angle of offset from the perpendicular to the work to match the table you wish to use (30.0, 29.5, or 29.0). The bit must then be aimed straight at the work (the fishtail gauge is designed to help in this setup).

All six of the tables provided assume that the bit has been positioned so that the theoretical sharp V end of the bit is even with the surface of the work to be threaded. This means a truncated bit must be positioned shy of the work surface by the amount of truncation. This becomes the position where you set the compound slide's micrometer collar to zero. All infeeds are done with the compound slide and are read on that collar. Note that the truncation must not exceed 0.2165 x the pitch of thread to be cut (.250 x cos(30) x pitch) . Error on the side of a more sharply pointed bit.

The tables present infeeds that distribute the total cut over a number of passes. For example, If there are 7 passes listed in the table for a particular pitch then each pass will remove $1/7^{th}$ of the cross sectional area of the metal to be removed.

There are six tables available to meet the operator's specific lathe and the angle of infeed. All are infeeds of the compound slide and are cumulative (note the total cut and the last cut are the same). This means that once you set the zero you don't have to figure out how far to advance the cross-feed, just advance to the next setting. Three of the tables are for lathes that the compound slide's micrometer collar reads in actual movement and three for lathes that read in double of the actual compound slide's movement (analogous to reading in radius vs. reading in diameter on the cross-feed slide's micrometer collar). For each of those two types of lathes there are tables for 30, 29.5, and 29 degree infeeds to allow you to choose which you want to use.

Printable chart forms of tables provided by Dr. John Morrissey.
Charts extended to include double readings and additional infeed angles at Dave Ford's suggestion.
Thanks to George Bulliss for facilitating this work and making it available on HSM downloads.

Wes Brenner