FTE-Spindle-9W-9N-10K:

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Here's how SBL made the threaded spindles:
The material was a low carbon steel (8620 if I remember right) sawed to length. It was then drilled(trepanned) in a special machine made by South Bend. Then all the diameters were turned approximately .020" oversize, except for the thread diameters (and the gear diameter on the 9/10K) These were left 1/4" oversize (thread protector). The I.D. taper was also bored with grind stock. The spindle was then carburized about .060" deep (not hardened yet). After carburizing, the thread protecters were turned off and the recesses and keyways were added. All the carbon that was added was removed from these areas to prevent them from getting hard. Back to heat treat to be hardened and straightened. Then a rough grind and the threads were cut. The nose threads were cut with a thread mill and the take-up nut threads were single pointed. Finish grind the O.D's and grind the I.D. taper, and last, but not least, super finish. Super finishing, kind of like honing with fine stones and lots of oil. The finish on 10, 13, 14-1/2, and 16" main bearing diameters were 2 to 4 RMS, cone diameters 8 to 10 RMS (I think). 9/10K were 8 to 10 RMS on both.
Ted Pflugner
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9W-Early No. 5, 9-inch Workshop spindle threads are 1-3/8" x 10tpi.
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The 405 has a slot across the inside top of the bearings with an oil hole in the center. These slots measure 3/16 wide by 3/32 deep. Use 3/16 x 3/16 felt for wicks.
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9W-9N- (No.15-9A-9B-9C) spindle threads are 1-1/2" x 8tpi. Taper is 0.60235TPF like a #3MT, but the large taper end is 0.938 dia. Takes a spindle adaptor sleeve for a #2MT center. Spindle bore is 3/4 inch.
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10K-spindle threads are 1.5 x 8tpi, Bore is 27/32 inch.
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The SBL oil recommendation for the spindle:
A 100 SUS @ 100 Deg. F. or ISO 22.
100 SUS @ 100 Deg. F. equals a 10W oil.
DO NOT use a detergent additive engine oil.
Spindle oil doped with additives that prevent rusting are acceptable.
use Mobil Velocite #10 Spindle Oil or equivalent .
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