

Abraham Farid

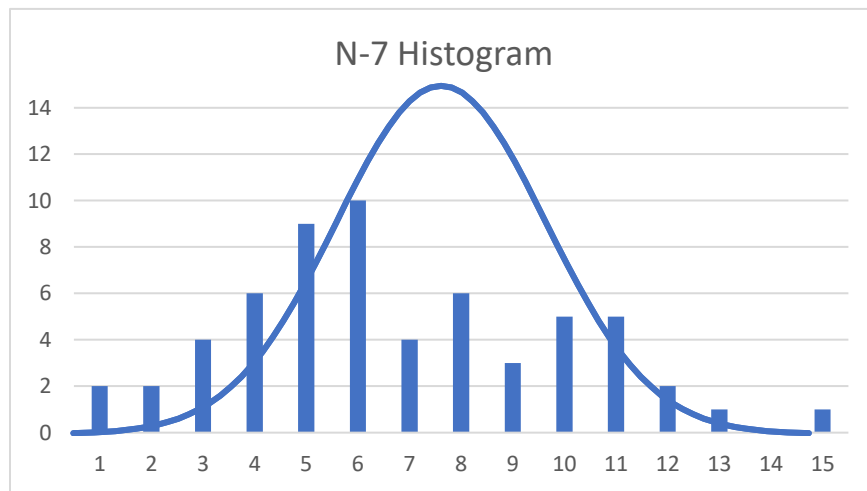
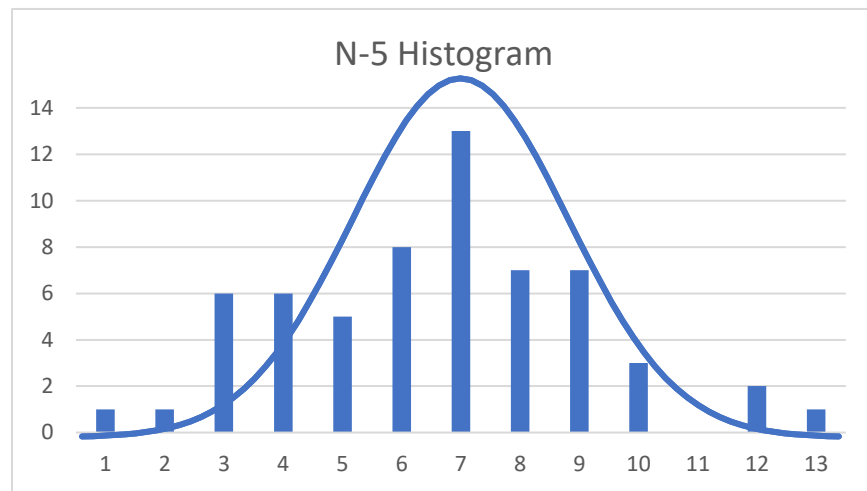
MANF3000

Professor Rourke

6/25/2019

Quality Engineering Lab 1

Qualitative Analysis:



Comparing the two graphs based off how capably they are with their process, N-5 would be the more capable process because it follows the curve better without as many parts outside the curve. N-7 has a lot of data that is outside the normal curve and most of the data is on the left side of the graph which means a lot of the parts are on the lower end of the tolerance.

Quantitative Analysis:

N-5

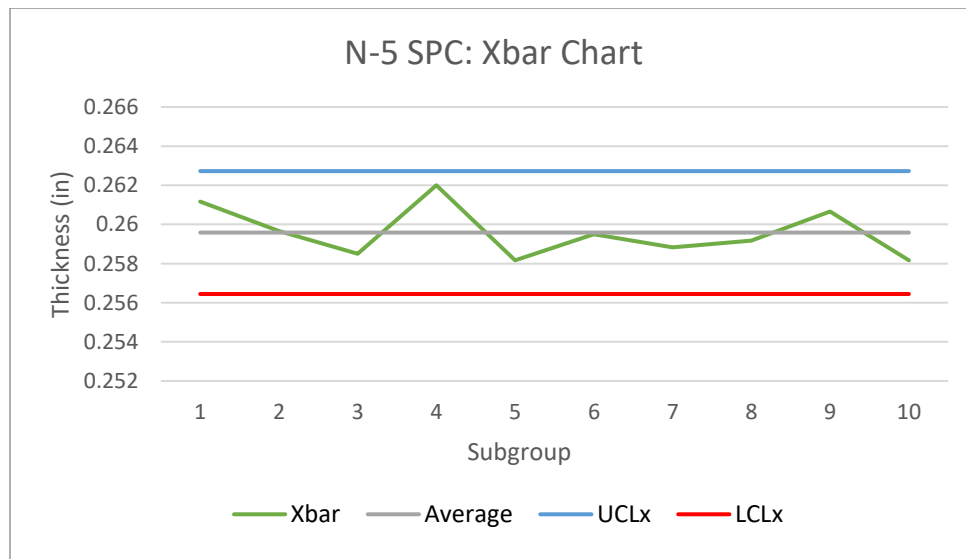
Capability	$\frac{USL - LSL}{6 * s}$	0.6597
Stability	$\frac{USL - LSL}{6 * \sigma_0}$	0.6497

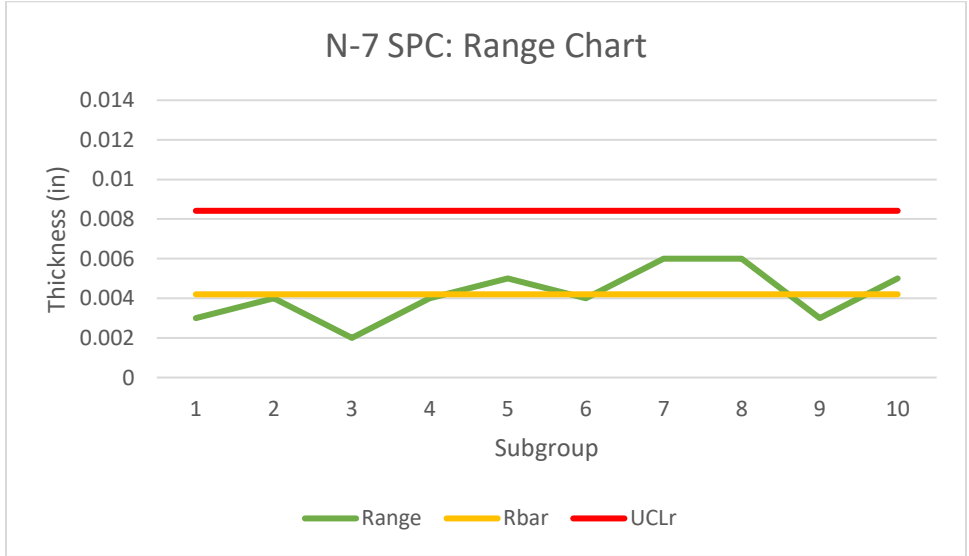
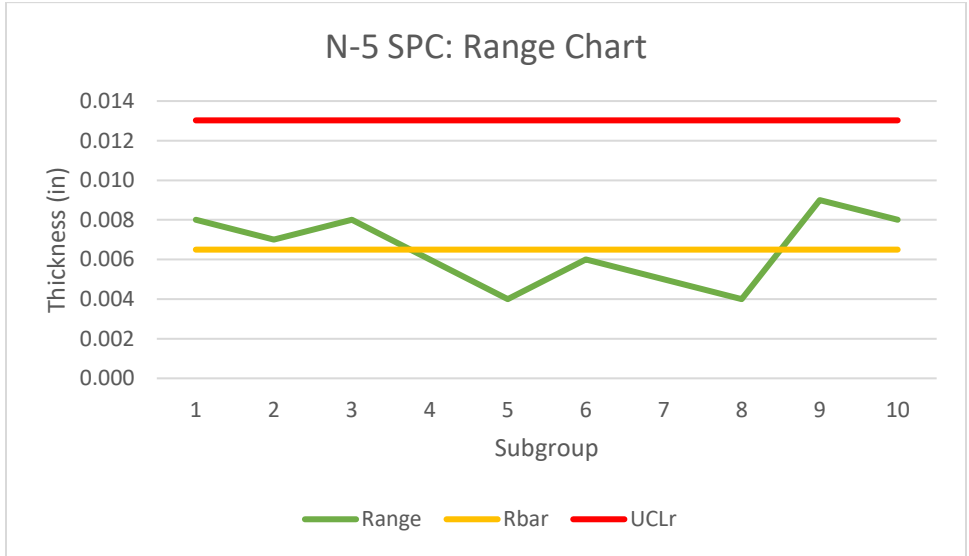
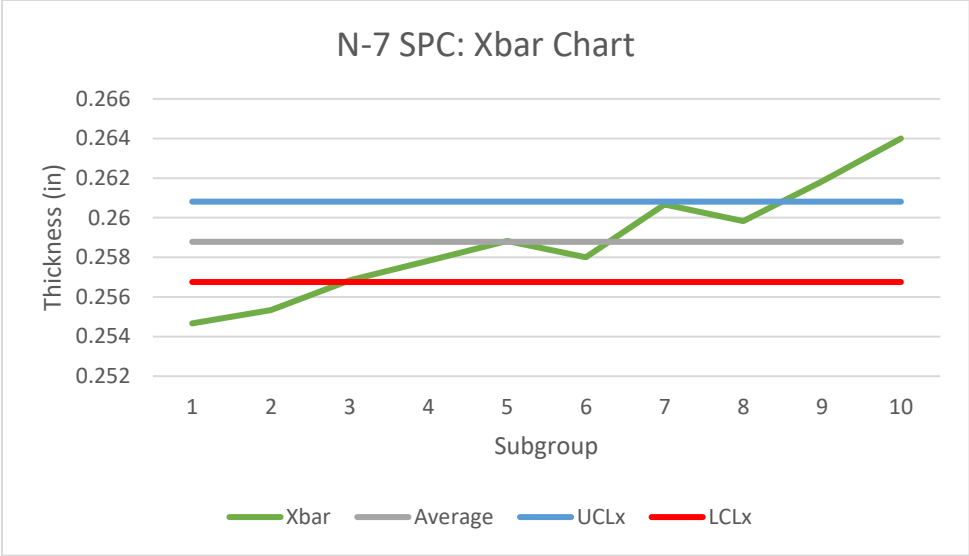
N-7

Capability	$\frac{USL - LSL}{6 * s}$	0.5333
Stability	$\frac{USL - LSL}{6 * \sigma_0}$	1.006

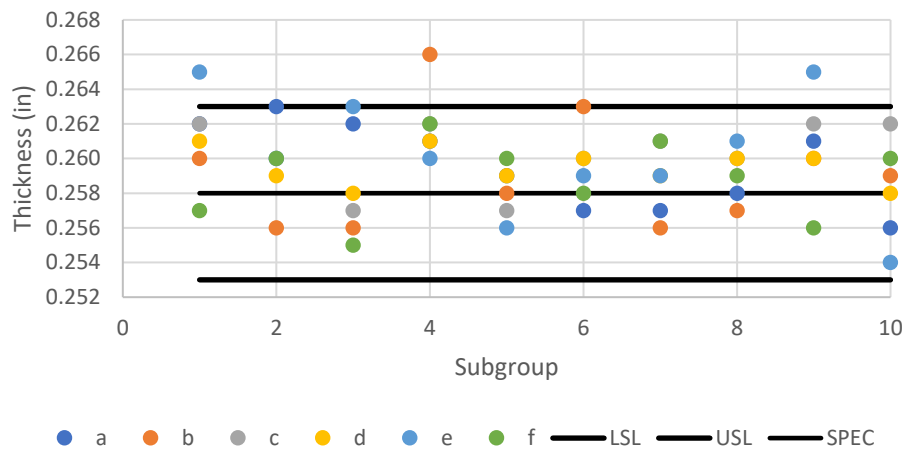
From the capability of both of these data sets is that neither one is capable because they are both well below 1. When comparing N-5 to N-7 N-5 would be the more capable one to use because its capability is 0.6597 which is closer to one than 0.5333.

Stability wise N-7 would be the more stable and will create more accurate parts than N-5 since N-7 has a stability of 1.006.





N-5 SPC: X-Chart (Individuals)



N-7 SPC: X-Chart (Individuals)

