



DATA VISUALIZATION USING MINITAB



Data Modeling

Data modeling is the process of creating a data model for an information system by applying certain formal techniques. Analysis of variance (ANOVA) is a collection of statistical models and their associated estimation procedures used to analyse the differences among group means in a sample.

IPE-314
QUALITY MANAGEMENT
SESSIONAL

Submitted To
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	Vehicle	Type	Fuel	City MPG	Hwy MPG	Combined MPG	Retail (\$1000)	Safety (0-5)	Interior Volume	Cargo Volume	Total Volume
1	A	SUV	Gas	17	22	19.25	31.3	4	97.3	89.7	187.0
2	B	Sedan	Gas	21	31	25.50	31.0	4	118.3	14.0	132.3
3	C	Sedan	Hybrid	40	39	39.55	35.6	5	118.3	14.0	132.3
4	D	Sedan	Gas	25	35	29.50	22.1	5	102.7	15.4	118.1
5	E	Sedan	Hybrid	43	39	41.20	26.0	5	102.7	15.4	118.1
6	F	Sedan	Gas	27	34	30.15	16.2	4	92.1	12.3	104.4
7	G	SUV	Gas	16	20	17.80	26.9	3	89.1	66.8	155.9
8	H	SUV	Gas	20	25	22.25	28.9	4	145.7	95.4	241.1

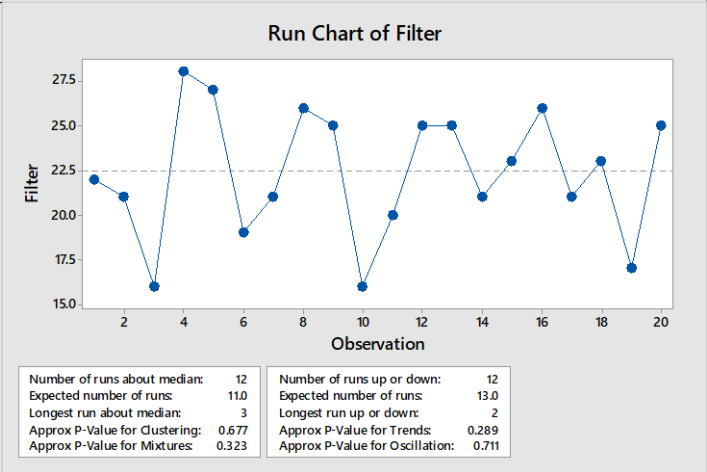
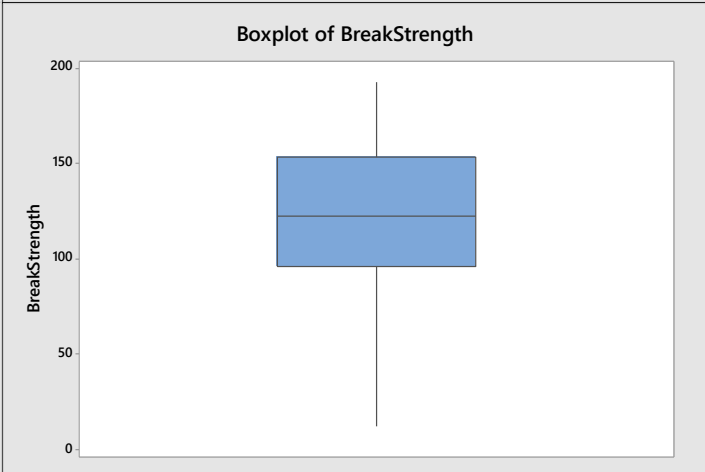
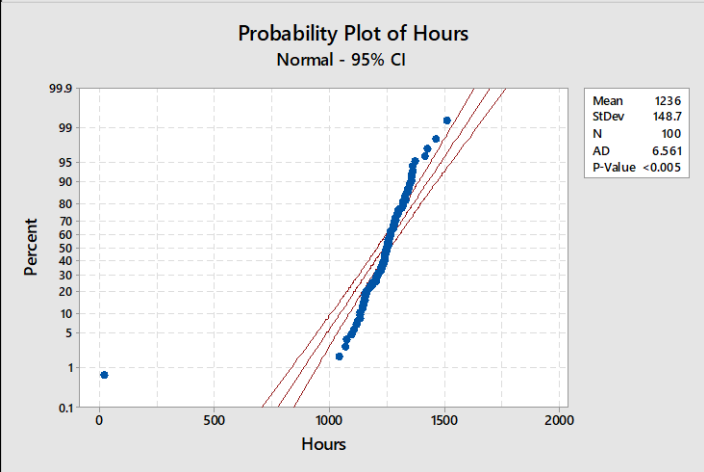
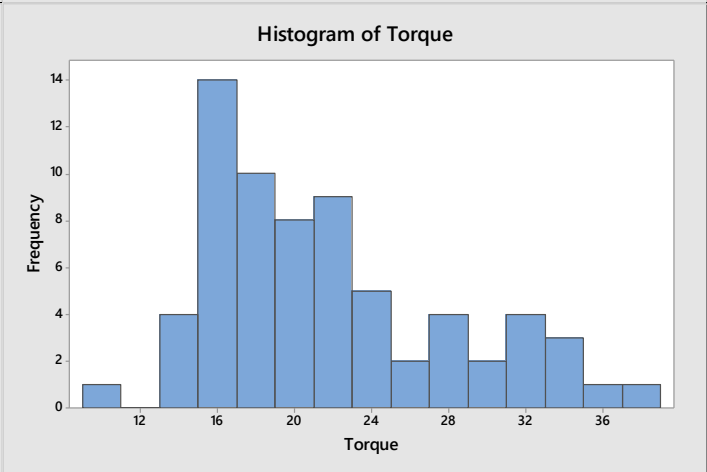
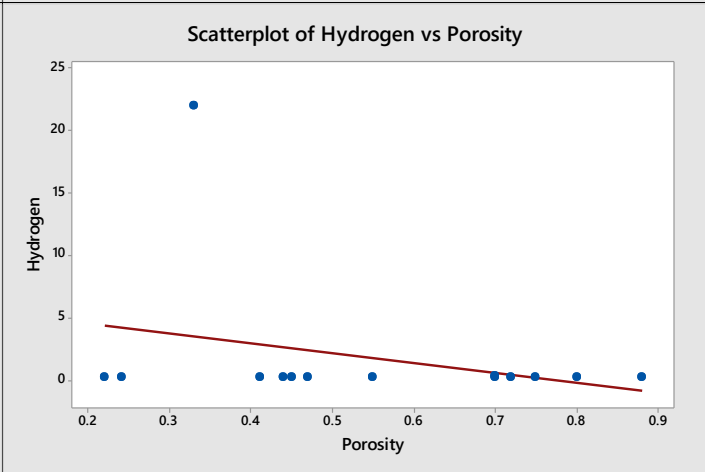
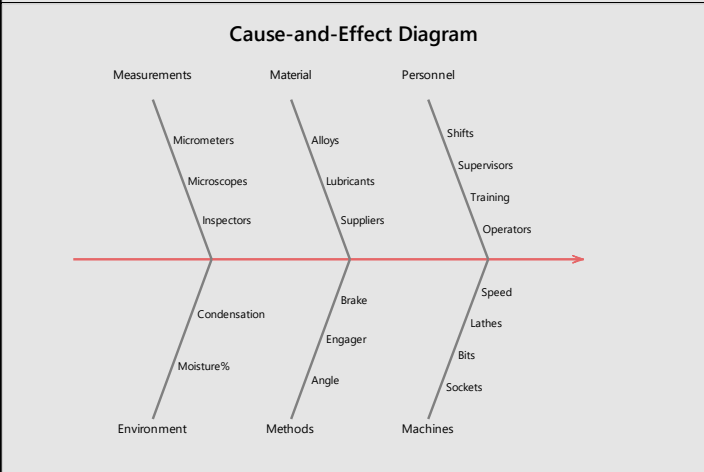
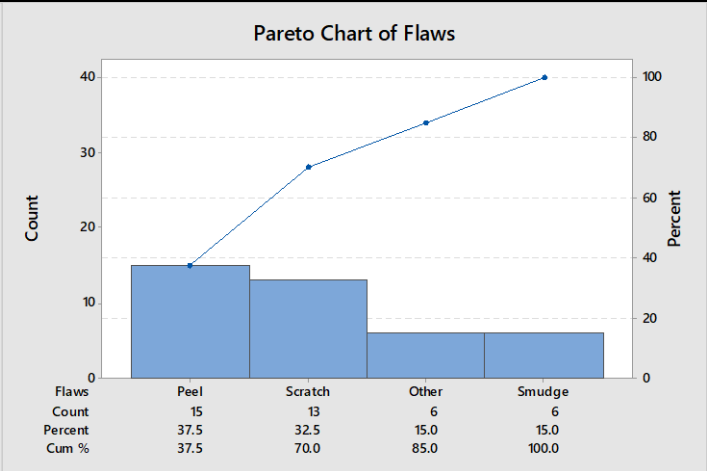
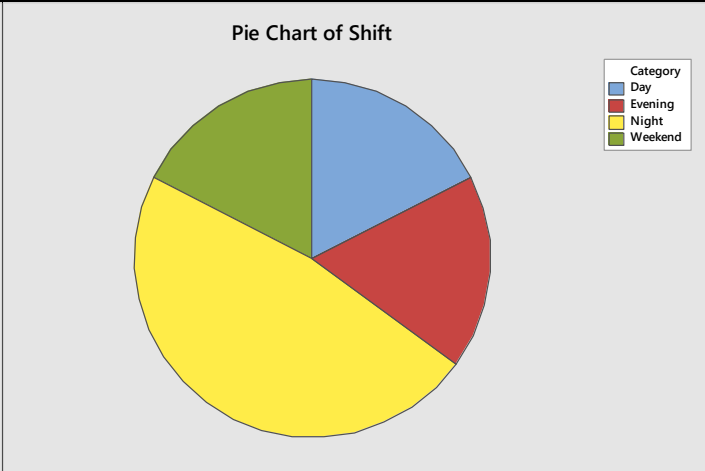
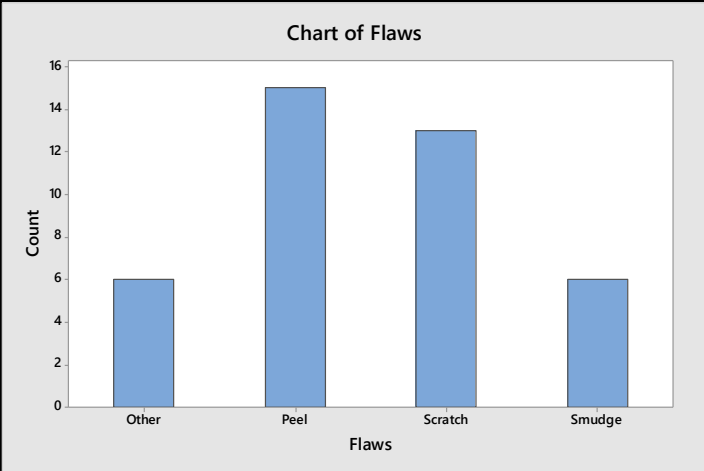
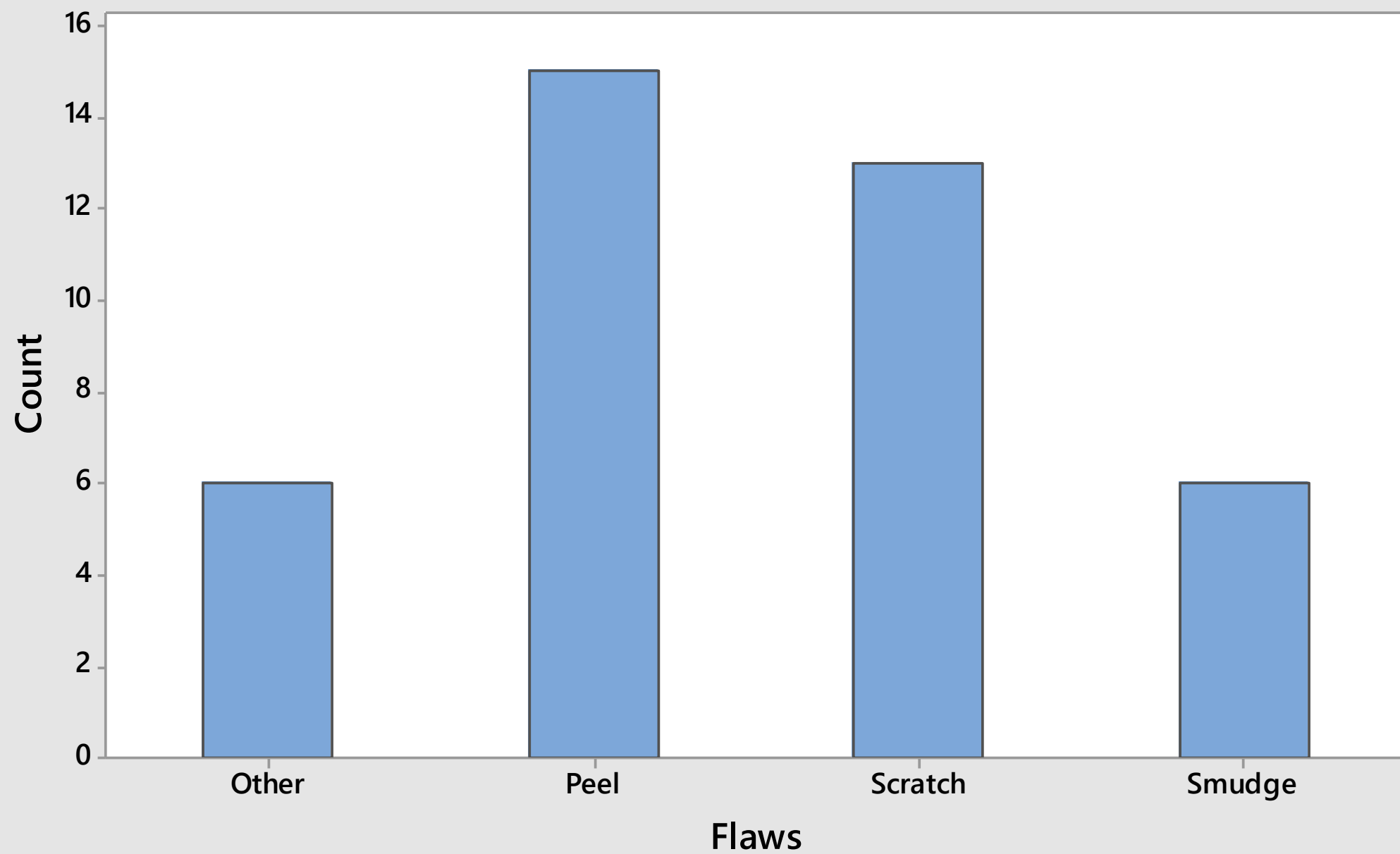
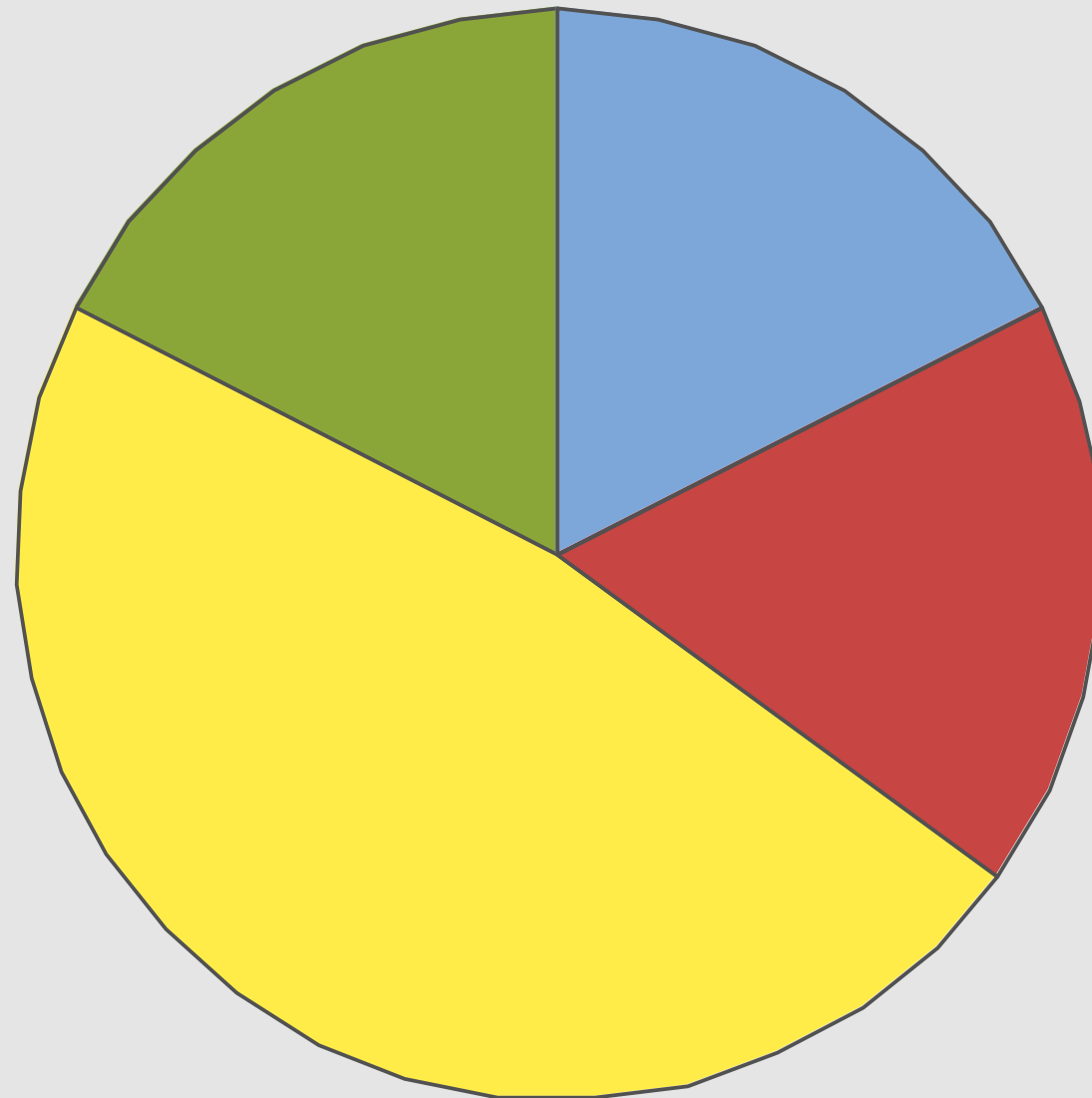


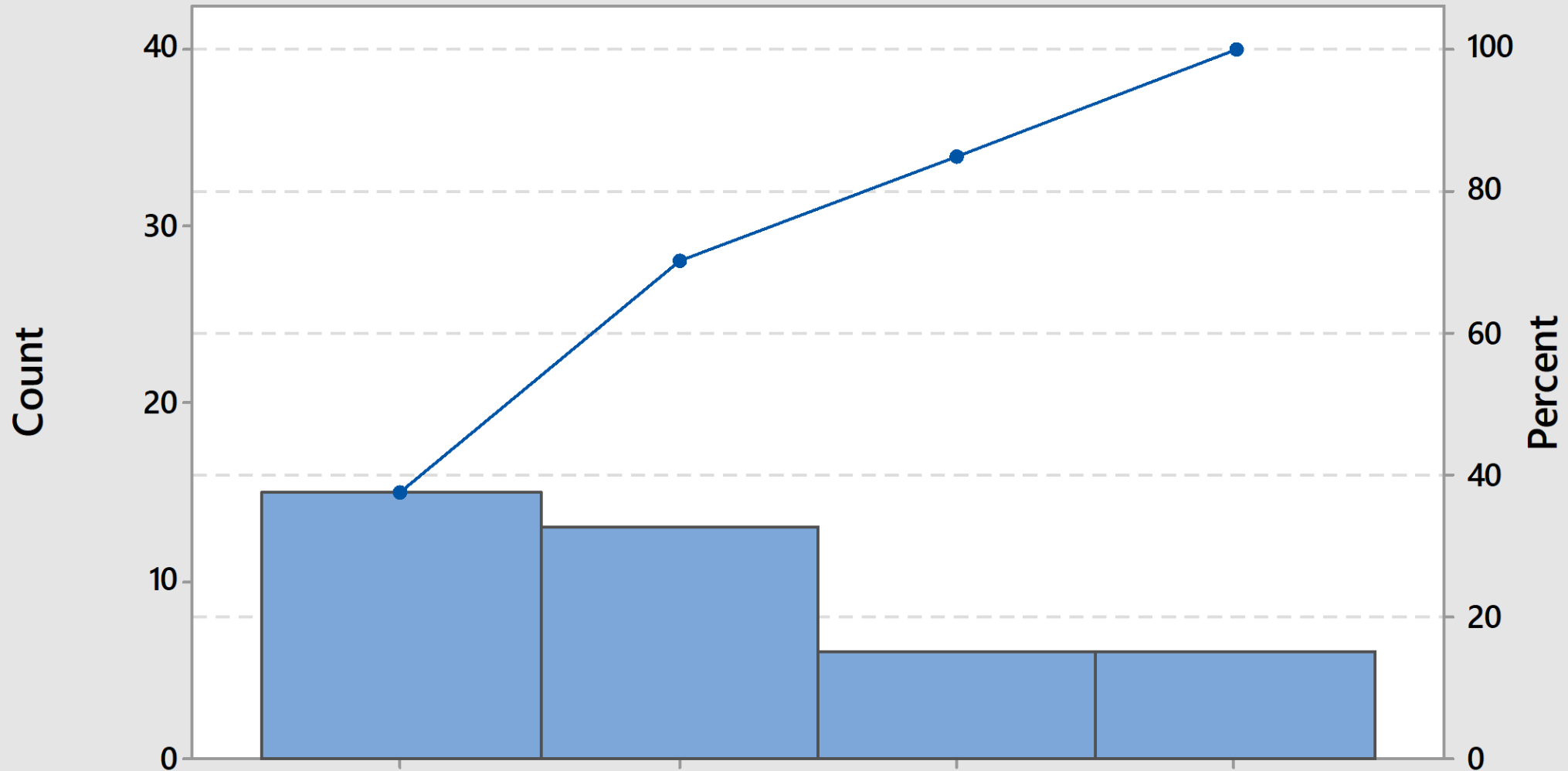
Chart of Flaws



Pie Chart of Shift

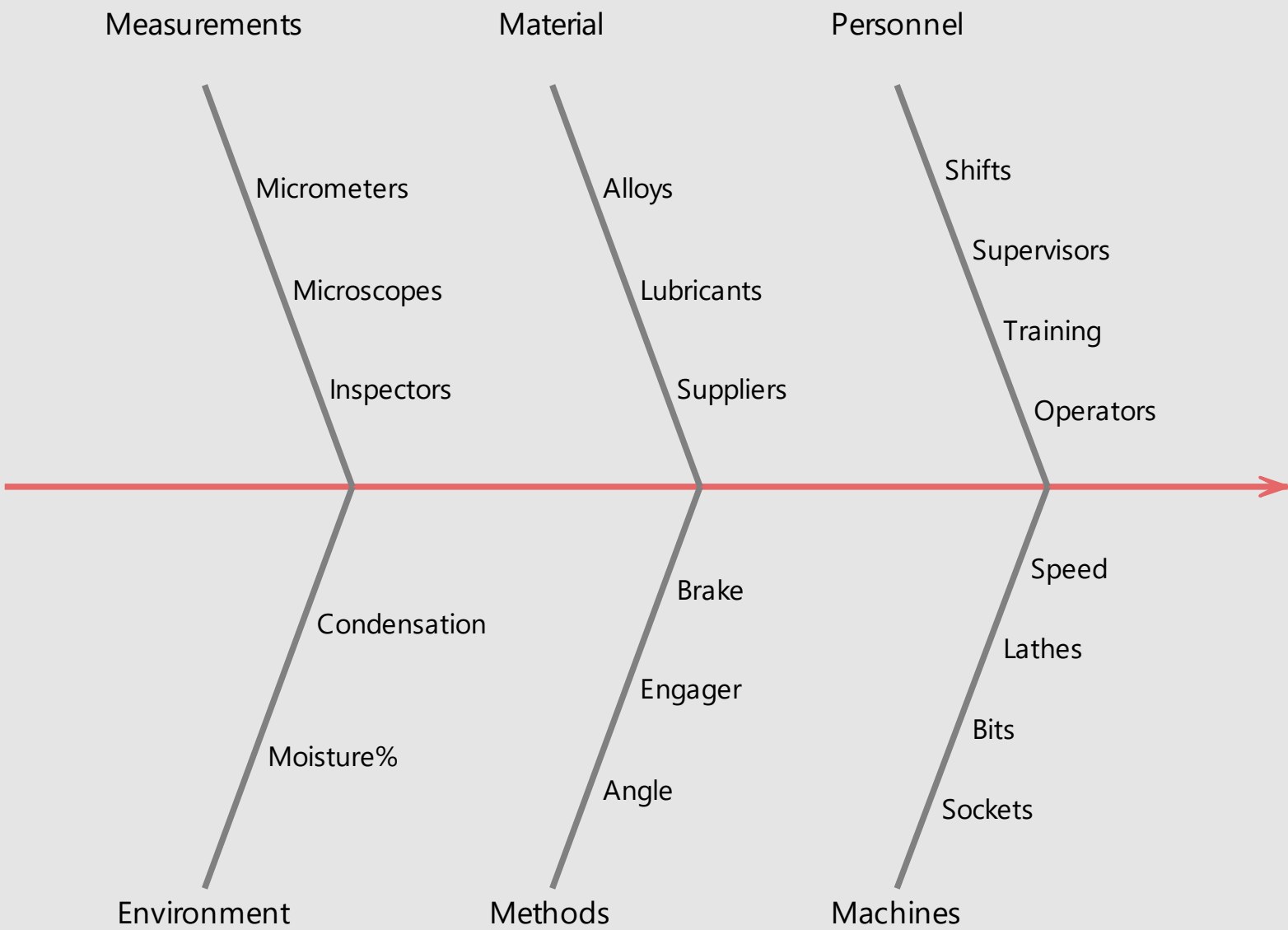


Pareto Chart of Flaws

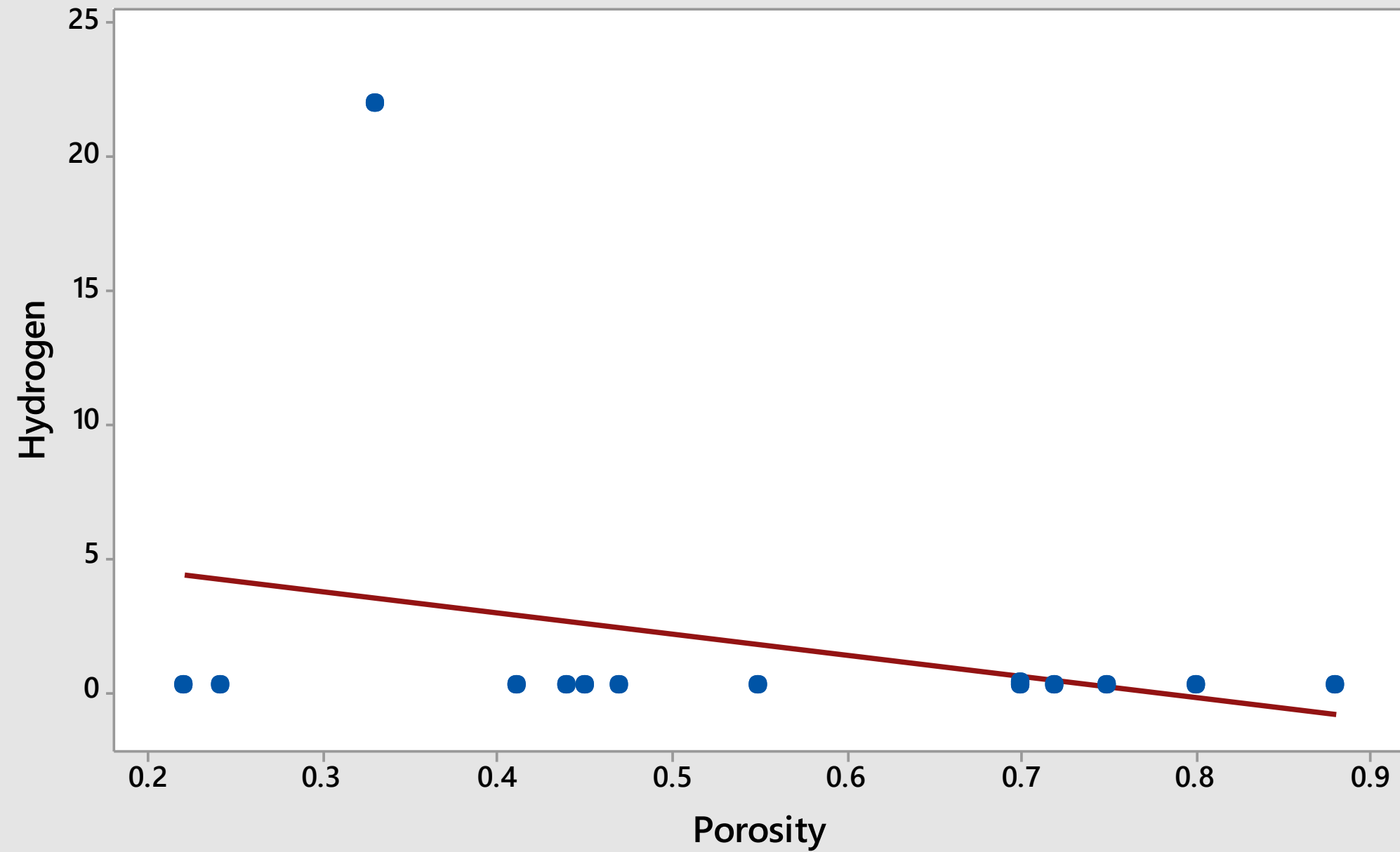


Flaws	Peel	Scratch	Other	Smudge
Count	15	13	6	6
Percent	37.5	32.5	15.0	15.0
Cum %	37.5	70.0	85.0	100.0

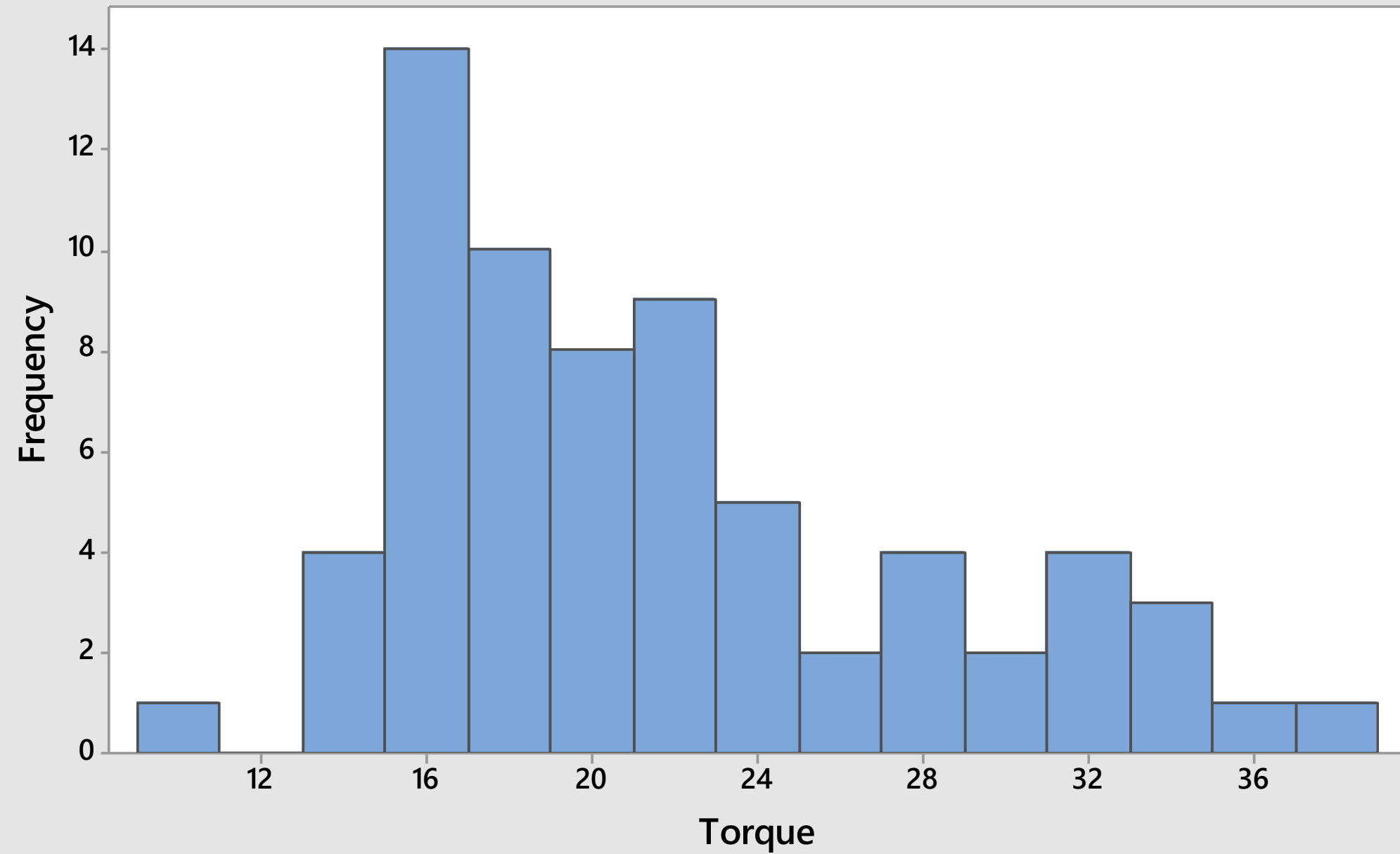
Cause-and-Effect Diagram



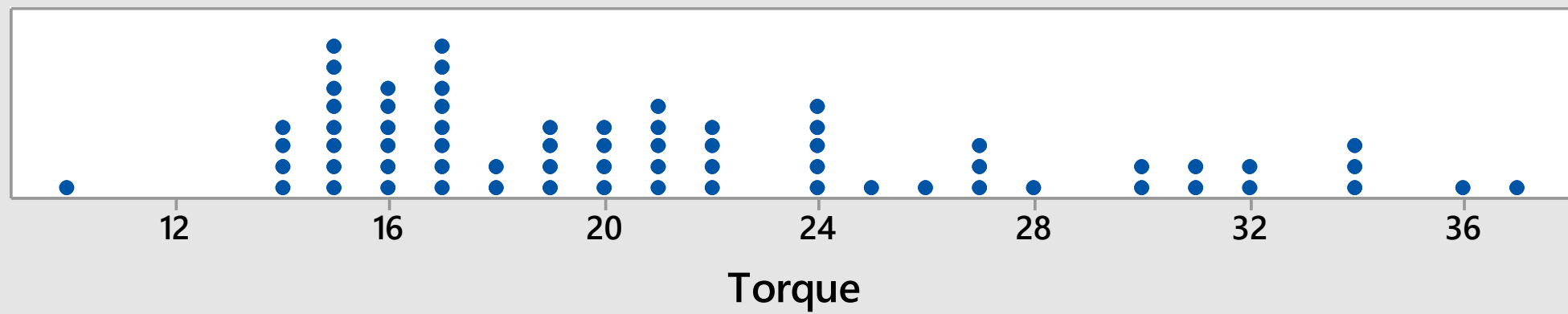
Scatterplot of Hydrogen vs Porosity



Histogram of Torque

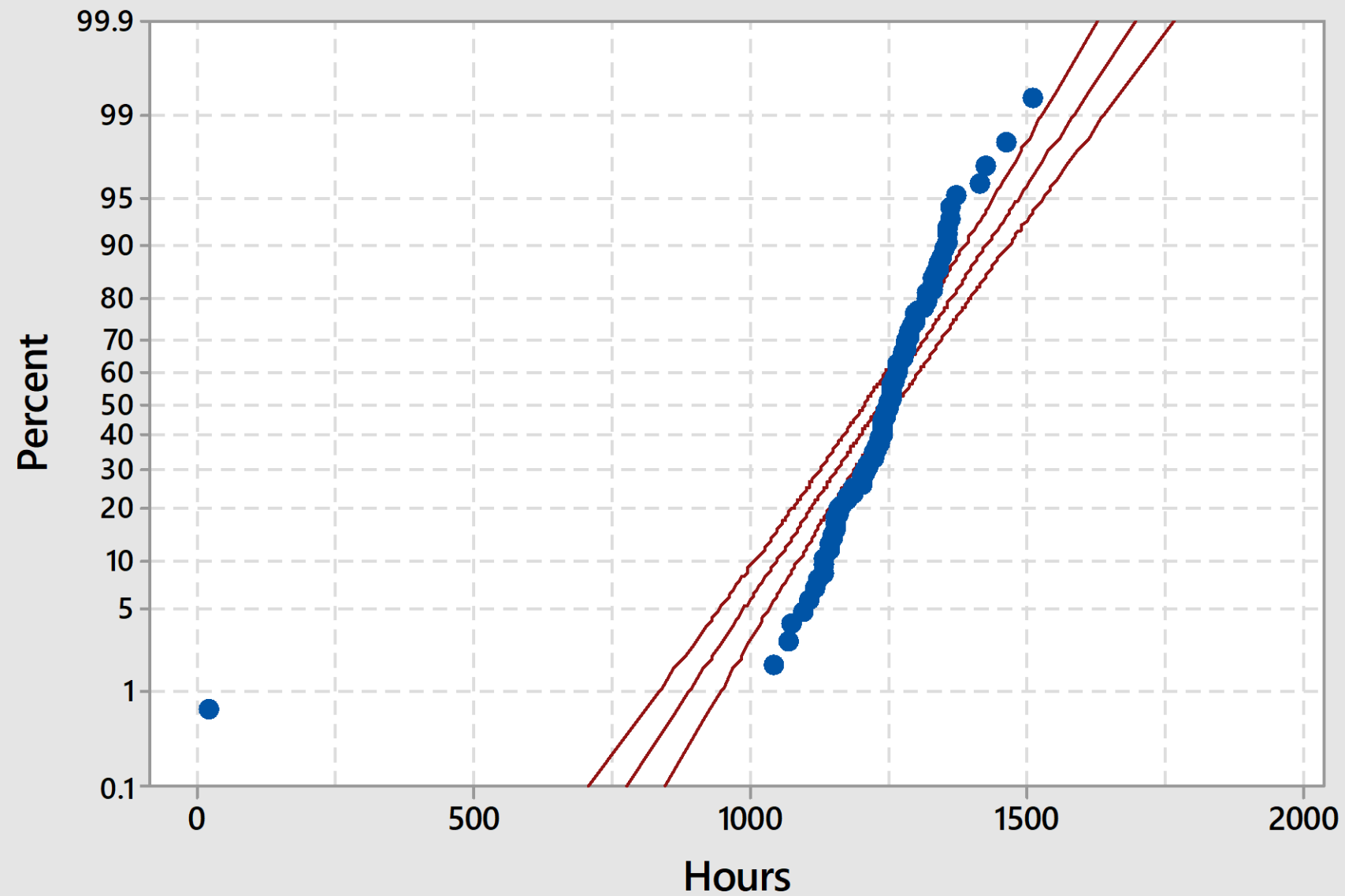


Dotplot of Torque



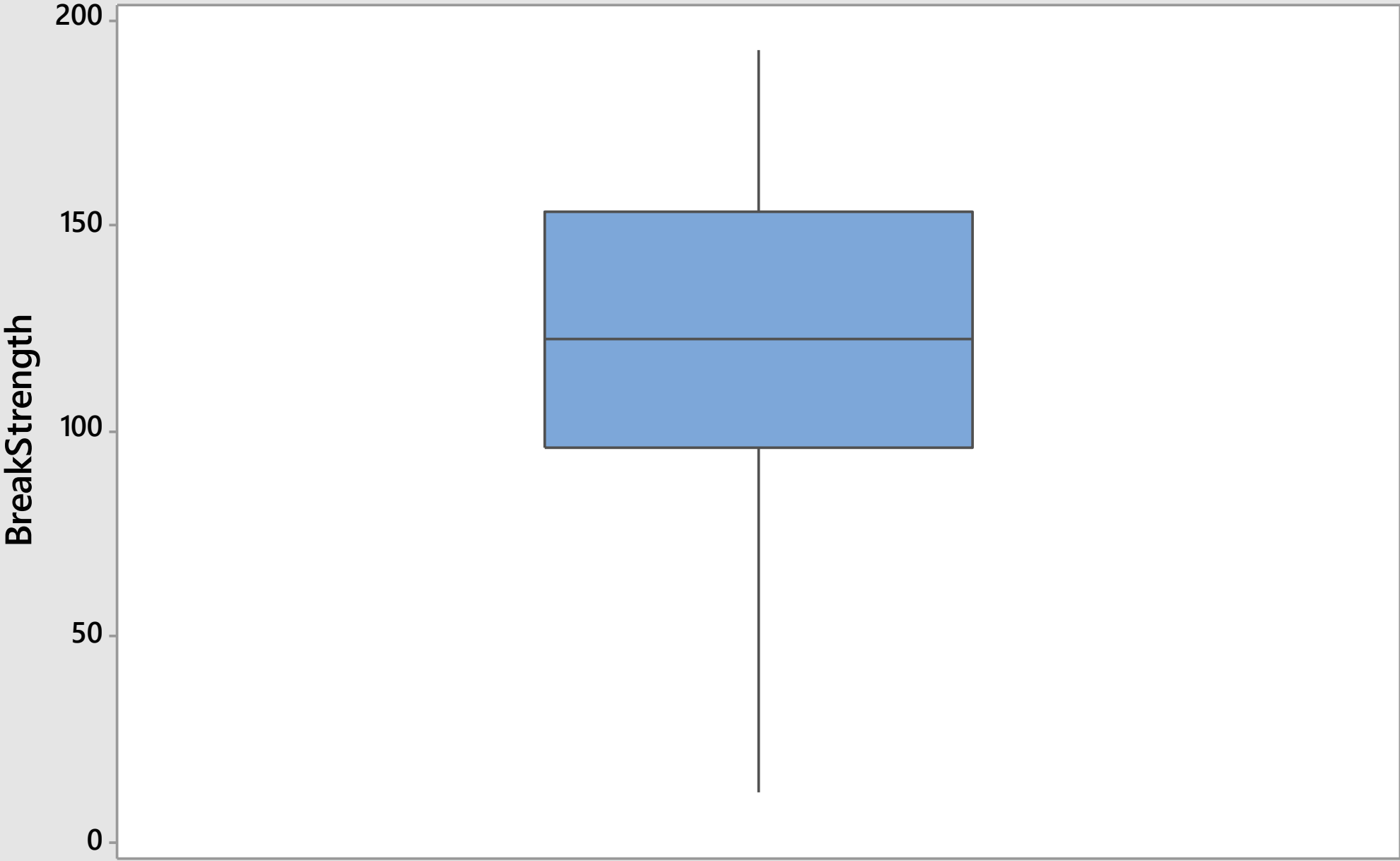
Probability Plot of Hours

Normal - 95% CI

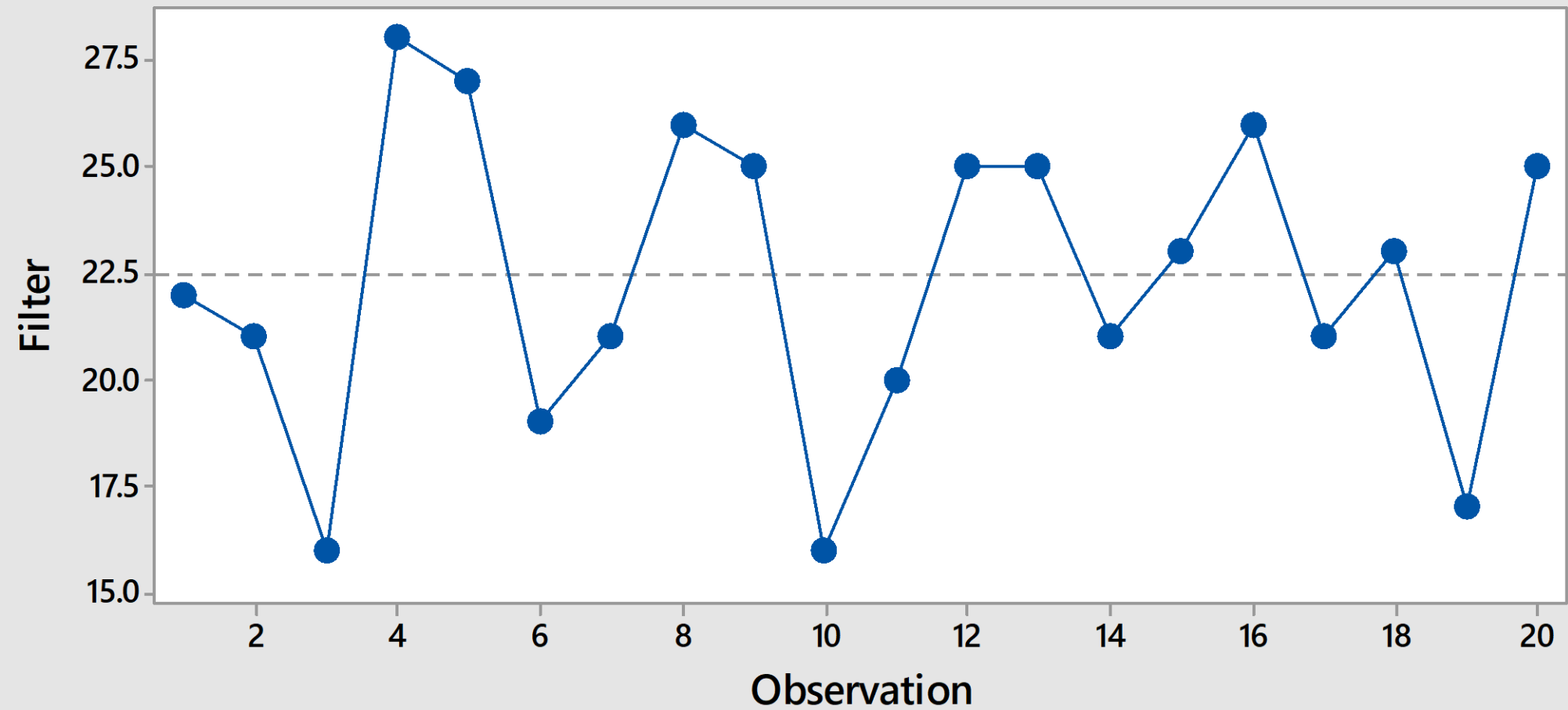


Mean	1236
StDev	148.7
N	100
AD	6.561
P-Value	<0.005

Boxplot of BreakStrength



Run Chart of Filter



Number of runs about median:	12
Expected number of runs:	11.0
Longest run about median:	3
Approx P-Value for Clustering:	0.677
Approx P-Value for Mixtures:	0.323

Number of runs up or down:	12
Expected number of runs:	13.0
Longest run up or down:	2
Approx P-Value for Trends:	0.289
Approx P-Value for Oscillation:	0.711