|  |  |  |
| --- | --- | --- |
| Sample no | No of failures | Fraction nonconforming |
| 1 | 3 | 0.06 |
| 2 | 2 | 0.04 |
| 3 | 3 | 0.06 |
| 4 | 2 | 0.04 |
| 5 | 3 | 0.06 |
| 6 | 2 | 0.04 |
| 7 | 5 | 0.10 |
| 8 | 3 | 0.06 |
| 9 | 7 | 0.14 |
| 10 | 2 | 0.04 |
| 11 | 1 | 0.02 |
| 12 | 1 | 0.02 |
| 13 | 3 | 0.06 |
| 14 | 2 | 0.04 |
| 15 | 5 | 0.10 |
| 16 | 4 | 0.08 |
| 17 | 3 | 0.06 |
| 18 | 9 | 0.18 |
| 19 | 4 | 0.08 |
| 20 | 2 | 0.04 |
| 21 | 1 | 0.02 |
| 22 | 0 | 0.0 |
| Total | **67** | **1.34** |

**Number and fraction defective**

**No of nonconformities on each inspection unit**

|  |  |
| --- | --- |
| Sample No. | No. of failures |
| 1 | 12 |
| 2 | 9 |
| 3 | 25 |
| 4 | 16 |
| 5 | 10 |
| 6 | 13 |
| 7 | 11 |
| 8 | 18 |
| 9 | 12 |
| 10 | 8 |
| 11 | 9 |
| 12 | 10 |
| 13 | 12 |
| 14 | 9 |
| 15 | 8 |
| 16 | 11 |
| 17 | 24 |
| 18 | 13 |
| 19 | 10 |
| 20 | 11 |
| 21 | 11 |
| 22 | 10 |
| Total | **272** |

**Number of nonconformities in plastic doors**

|  |  |  |  |
| --- | --- | --- | --- |
| Door No. | Door Size | No. of NCs | NCs per unit area |
| 1 | **25** | **2** | **0.08** |
| 2 | **30** | **3** | **0.10** |
| 3 | **40** | **4** | **0.10** |
| 4 | **40** | **6** | **0.15** |
| 5 | **40** | **3** | **0.08** |
| 6 | **30** | **4** | **0.13** |
| 7 | **25** | **2** | **0.08** |
| 8 | **25** | **3** | **0.12** |
| 9 | **30** | **4** | **0.13** |
| 10 | **30** | **5** | **0.17** |
| 11 | **25** | **4** | **0.16** |
| 12 | **30** | **5** | **0.17** |
| 13 | **30** | **3** | **0.10** |
| 14 | **30** | **2** | **0.07** |
| 15 | **40** | **3** | **0.08** |
| 16 | **25** | **4** | **0.16** |
| 17 | **40** | **5** | **0.13** |
| 18 | **40** | **5** | **0.13** |
| 19 | **30** | **3** | **0.10** |
| 20 | **30** | **2** | **0.07** |
| Total | **635** | **72** | **0.11** |

**X̅ and R values for steel pipe diameters (in centimeters)**

|  |  |  |
| --- | --- | --- |
| Day | X̅ | R |
| 1 | **10.724** | **0.040** |
| 2 | **10.730** | **0.016** |
| 3 | **10.718** | **0.040** |
| 4 | **10.728** | **0.014** |
| 5 | **10.730** | **0.027** |
| 6 | **10.720** | **0.020** |
| 7 | **10.720** | **0.038** |
| 8 | **10.711** | **0.026** |
| 9 | **10.713** | **0.027** |
| 10 | **10.718** | **0.008** |
| 11 | **10.717** | **0.039** |
| 12 | **10.730** | **0.026** |
| 13 | **10.735** | **0.028** |
| 14 | **10.726** | **0.041** |
| 15 | **10.724** | **0.025** |
| 16 | **10.720** | **0.017** |
| 17 | **10.727** | **0.035** |
| 18 | **10.720** | **0.037** |
| 19 | **10.726** | **0.030** |
| 20 | **10.724** | **0.012** |
| 21 | **10.718** | **0.030** |
| 22 | **10.722** | **0.012** |
| Total | **235.901** | **0.608** |

**Data collected from the lathe machine**

|  |  |  |  |
| --- | --- | --- | --- |
| Sample | X̅ | Sample deviation | Cumulative sum of deviations |
| 1 | **11.20** | **0.20** | **0.20** |
| 2 | **10.77** | **-0.23** | **-0.03** |
| 3 | **10.27** | **-0.73** | **-0.83** |
| 4 | **11.29** | **0.29** | **-0.54** |
| 5 | **10.29** | **-0.71** | **-1.25** |
| 6 | **11.27** | **0.27** | **-0.98** |
| 7 | **12.31** | **1.31** | **0.33** |
| 8 | **11.19** | **0.19** | **0.52** |
| 9 | **10.28** | **0.72** | **1.24** |
| 10 | **11.13** | **0.13** | **1.37** |
| 11 | **11.71** | **0.71** | **2.08** |
| 12 | **11.69** | **0.69** | **2.77** |
| 13 | **121.13** | **1.13** | **3.90** |
| 14 | **11.11** | **1.11** | **5.01** |
| 15 | **10.51** | **-0.49** | **4.52** |
| 16 | **11.80** | **0.80** | **5.32** |
| 17 | **9.72** | **-1.28** | **4.04** |
| 18 | **12.23** | **1.23** | **5.27** |
| 19 | **11.92** | **0.92** | **6.19** |
| 20 | **11.02** | **0.02** | **6.21** |