Cecil rice export

CECIL RICE EXPORT REPORT

This report will focus on Cecil Rice Export and its aim is to develop more organized system which enhanced the productivity of each hour and for each three days. We discussed and calculated belowthe three questions.

In the Cecil Rice Export, to determine whether the process is in control or out of control we should use x-Charts and R-Charts. X-Charts are usually used when we know standard deviation of the sample. We calculate the upper and lower control limits based on that data.

For this data, we assumed the standard deviation as 3 and we found the upper and lower limits for each day's shifts. According to Monday Shift 1, the lower limit is 69. 23 hence the numbers that are below 69. 23, are becoming out of control. And the upper limit is 71. 91, so the numbers which are above 71. 91, become out of control due to assignable causes and not natural causes. In addition, Tuesday Shift 1, the lower limit is 68. 54, thus the numbers which are below 68. 54, are out of control. The upper limit is 71. 22 and the numbers that are above 71. 2, become out of control. Finally, those processes which we calculated as upper and lower limits should be under control. In R-Charts, the important part is the upper and lower control limits and the specific mean. We calculated the upper and lower control limits for each day of shifts according to n is equal to four. For instance, for Monday Shift 2, the upper control limit is 4879 pounds and the lower control limit is 4865 pounds.

We developed control charts for each shift three days. For Monday shifts from 00: 00 to 08: 00 the upper control limit is 71. 1 and the lower control

limit is 69. 23. From 08: 00 to 16: 00, the upper control limit is 71. 30 and the lower control limit is 68. 25. And from 16: 00 to 00: 00 the upper limit is 71. 45 and the lower limit is 68. 77. According to our calculations, the best shift on Monday is from 08: 00 to 16: 00. In addition, for Tuesday shifts from 00: 00 to 08: 00 the upper control limit is 71. 22 and the lower control limit is 68. 54. From 08: 00 to 16: 00, the upper control limit is 71. 24 and the lower control limit is 68. 55.

From 16: 00 to 00: 00, the upper control limit is 71. 05 and 68. 37. The best shift in terms of productivity is from 16: 00 to 00: 00. Finally, for Wednesday the best shift is from 16: 00 to 00: 00. Because the customers expect the bags that are closest to the specific mean 70. For R- Charts, we assumed mean as 70 and found the upper and lower control limits for each days. For Monday shift, from 08: 00 to 16: 00, it seems more profitable when we considered with the other shifts on Monday. The upper and lower control limits are 4879 and 4865 pounds.

Furthermore, for Tuesday, as same as Monday shift, from 08: 00 to 16: 00 is more suitable than other shifts for customers. We calculated the upper and lower control limits as 4942 and 4900 pounds. For the last shift, the best and more productive hours are from 16: 00 to 00: 00 and the upper and lower limits are found as 4977 and 4900 pounds.

Each shift in each day, the productivity hours change according to the personals and seniors. In order to increase output levels and shorten the lead times for customer, we mixed all shifts in each three days.

By using the pooled chart where we calculated the upper and lower control limits for each days and each charts. Then, we took the average of UCLs and

LCLs for each day for x-Charts. For instance, on Monday the average UCL is 71. 55 and LCL is 68. 87. Finally, we calculated the average of D3s and D4s for each shifts on each days. And we multiplied the D3s and D4s with the specific mean 70. Lastly, we found UCLs and LCLs for R- Charts for each day. For example, on Tuesday, UCL and LCL were calculated as 4975 and 4907 pounds. These numbers are our control limits.