Improvement in Delivery Fulfilment and Quality to Reduce Line Stoppage for an Automotive Part

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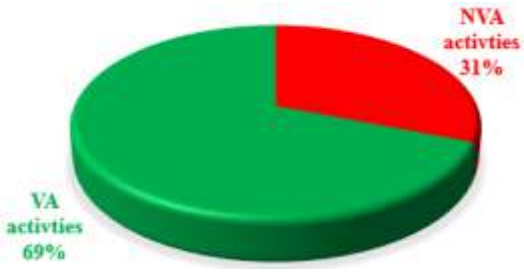
Abstract:

Lean is the technique which identifies the wastes & reduces the same to attain the competitive edge and to sustain the market share. To keep the market share, OEMs have to supply the products as per the market demand. To keep the OEMs market share, the suppliers should focus on on-time delivery with agreed quality requirements of OEMs. Enhancing the capacity and debottlenecking the critical processes/machines at the supplier end are crucial.

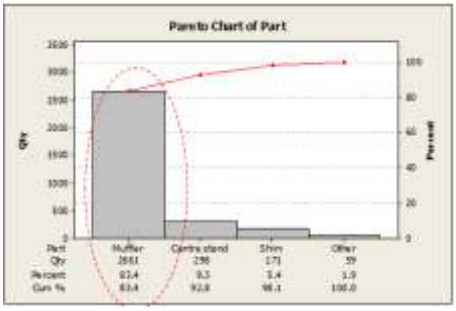
The project was selected to sustain the market share of "Scooter model C" by reducing the line stoppage caused by delivery and quality of muffler supplied by "Supplier H". Initially the Non Value Added activities at the weld shop have been captured using time study and video and the details were analyzed to understand the waste activities. During study weld shop contribute to reduced line stoppage and the stages where the bottle neck operation performed has been identified and with the help of lean tools such as takt time, waste identification & elimination, cell layout change, line balancing, improving the incoming parts quality, implementation of localized material handling systems with improved final checking fixtures have applied to improve the delivery and quality performance. Few stages were provided with material handling units, additional fixtures. Some stages were provided with new sequence of operation.

As a result, the overall reduction in line stoppage was 38% as against the target of 25%, in which non-availability reduction was 20% and quality issue reduction was 100%. As a quality improvement, alignment problem was reduced to 0% and resulted in 85% reduction in overall quality issue. The average scooter production was increased by 255 numbers per month.

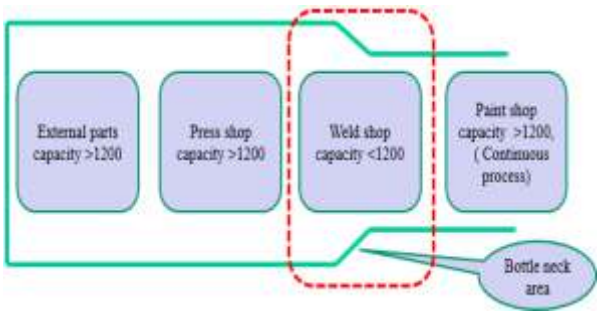
Line stopper contribution due to material non availability and quality issue



Weld shop NVA activities contribution



Muffler contribution to overall line stopper of scooter model C



Bottle neck area – weld shop