ABSTRACT
The present work explains the solutions of ongoing industrial problems in details related to connecting rod manufacturing operations. The solutions of each problem may not be generalized. Every existing problem is having Tailor-Made Solution (TMS). The probably diversified options for the solutions are identified and discussed with statistical measures. The necessary remedial measures are executed for shop floor activities for the individual case. The impacts of implemented actions for each case are discussed in details. The proposed solutions are justified by the feedback of implemented action.

The existing problems are identified from Customer Complaints Redressal Form (CCRF), Rework analysis, Rejection report, In-process Inspection Report (IIR), Final Inspection Report (FIR), Doc Inspection Report (DIR), Patrol Inspection Report (PIR), Process Capability Study Report (PCSR) and on-going shop floor production report. Five problems are identified related to connecting rod manufacturing and solutions to be implemented for individual cases.

The solutions for on-going shop floor production issues are derived with various problem-solving techniques. The brainstorming session, Cause and Effect Diagram (CED) (Fish Bone Diagram), Pareto Analysis, Failure Mode and Effects Analysis (FMEA), Kaizen, etc.; are used for Tailor-Made Solution (TMS) of individual cases. The solutions proposed are implemented to solve the respective production issues.

Various Quality Improvement tools are employed in various industries by many experts in one or another form in manufacturing industries. The gap is identified that there is no generalized methodology to solve the on-going problem. There is a need to generate the general steps to identify the non-conformance potential and to implement the necessary actions. There are numerous ways to identify improvement potential and implement the same with the higher degree of impact.

The thesis addresses five major questions in connecting rod manufacturing industries (1) Higher rejection in bush boring operation (2) dent marks in the small end (3) End float variation (4) Bend and Twist (5) Big End bore diameter variation of connecting rod.