Abstract—This Paper is a case study of a plastic industry in which the TQM implementation activity is carried out under which following quality improvement techniques are considered which are: 5S, 6 sigma, kaizen, poka-yoke. TQM is based on following principle: Quality first, quality integration, customer satisfaction, prevention rather than inspection & work force involvement. At the end of TQM implementation several objectives are achieved such as, 5S: effective organization of work is done, 6-sigma:-customer satisfaction and reduce the customer complaints, Kaizen:-material handling improvement and system improvement, Poka-yoke:-defects are identified which reduce the rejection and manual errors are identified. TQM is a participative, systematic approach for planning and implementing a constant organizational improvement process.

Keywords—Excellence, Implementation, Kaizen, Poka-Yoke, Quality, Six-Sigma.

I. INTRODUCTION

The TQM was established in 1920’s when statistical theory was first applied for production quality control. It is the concept which is developed in Japan in the year 1940’s led by Americans, such as Juran, Deming and Feigenbaum [1]. Now everyone has an experience of poor quality when they are dealing with organization. The experience of poor quality is exacerbated when employes of the company either are not empowered to correct quality and inadequacies of such a loss of customers and opportunities for competitors to take advantages of market need. Successful company understand the need of quality for their products. For this reason many company increase their quality and their standard continuously. The concept of TQM strongly concentrate on high quality product. This concept is totally depend on Japanese approach to quality management.

In the “JEEVANDHARA PLASTIC” under TQM we have considered quality tools such as 5S, 6sigma, kaizen, poka-yoke this will results in quality improvement and customer satisfaction for the company.

II. OBJECTIVE OF TQM

a) To analyze the implementation of TQM in manufacturing industry.
b) Explain the meaning of TQM
c) Identify cost of quality
d) Describe the evolution of TQM
e) Describe tool for identifying and solving quality problems.

III. BENEFITS OF TQM

The benefits of total quality management are never ending, helping in any organization for getting better results. The few of them are as follow,

1) More productivity and higher profitability.
2) Improved and innovative processes.
3) Strengthened competitive position.
4) Reduced costs and better cost management.
5) Improved customer focus and satisfaction.
6) Increased customer loyalty and retention.
7) Elimination of defects and waste.
8) Increased job security.
9) Improved employee morale.
10) Enhanced market image.

IV. RESULT TABLE

<table>
<thead>
<tr>
<th>Before Implementation Of TQM</th>
<th>After Implementation Of TQM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work place was not clean</td>
<td>Cleaning of work place is done.</td>
</tr>
<tr>
<td>Layout is not available.</td>
<td>Layout is available</td>
</tr>
<tr>
<td>More work on floor.</td>
<td>Work bench were made</td>
</tr>
<tr>
<td>Poka-yoke system is not available.</td>
<td>Poka-yoke system is available</td>
</tr>
<tr>
<td>Maintenance of machine is not done.</td>
<td>Maintenance is done on date</td>
</tr>
</tbody>
</table>
V. CONCLUSION

1. Material Handling
   BEFORE IMPLEMENTATION       AFTER IMPLEMENTION
   Raw material was not properly handle before implementation.
   After implementation proper room was made for raw material which helps in easy handling of material.

2. Spanner Arrangement
   BEFORE IMPLEMENTATION       AFTER IMPLEMENTION
   The spanners were not in proper order so there was difficulty in finding required spanner.
   Schematic arrangement of spanner was done with numbers.

3. Circuit Boards
   BEFORE IMPLEMENTATION       AFTER IMPLEMENTION
   Circuit boards and connection of machines were not properly arranged.
   Proper board was made for separate connection and circuit breaker was placed.

4. Fittings
   BEFORE IMPLEMENTATION       AFTER IMPLEMENTION
   The fittings kept in such a way that they occupied more space.
   They were arranged in proper way which required less space.

5. Finished Products
   BEFORE IMPLEMENTATION       AFTER IMPLEMENTION
   The finished products were kept near the work place area so it was difficult to the operator to work.
Finished product was kept away from work place area and arranged in proper way for easy dispatch.

6. Testing Room

There was no proper testing room available to analyses the product.

An ISI testing room was made for the testing purpose.

REFERENCES