

**Improvement in Equipment Maintenance and Performance Improvement**

Company: Polyester Fibre Chemical Company, India

Objective of the Engagement: To turnaround the company from a loss making unit to a profit making unit:  
Year 1998 to 2001**Audited Results of Improvement -- For the chemical company – Turnaround**

No.	Parameters	Before 1998	After May 2001	Remarks
1	No. Of Failures	24/month (avg.)	Zero	100% decrease
2	MTTR (Mean Time To Repair)	4 hours	2 hours	50% reduction. Further possible
3	Steady State Process Availability (Markov Analysis)	96.10%	99.5 %	Reached Max value
4	Median Corrective Maintenance Time (i.e. 50% of the jobs would be completed within this time)	2.49 hours	1.64 hours	Reduction of 51.8%. Further reduction possible
5	Maximum Corrective Time (i.e. 95% of the jobs would be completed within this time)	10.86 hours	7.16 hours	Reduction of 51.6 %. Further reduction possible.
6	Maintenance Cost	3 Crores (Approx)	1.6 Crores	Roughly 50% reduction
7	Production rate	1.66 T/hr	1.87 T/hr	13% increase over designed capacity
8	Reduction in delay in Spares procurement process	21 days	1day	95% reduction
9	Quality	3 Sigma	6 Sigma	100 % improvement
10	Leadership Position (Product)	4	1	Sells at premium

As a result of the reliability improvement initiative the company could improve the Quality and Reliability of its products, increase Availability of the manufacturing process and thus improve productivity and lower operational costs to such an extent that they could bring down the selling price of their product from Rs 112/- a kg to Rs 78/- per kg to beat their foreign competitors from Thailand and China but still make enough profits to turnaround a loss making organisation to a profit making organisation.

This was possible through empowerment of the operating personnel through the redesign of their maintenance policies and plans, introduction of condition based maintenance on top priority and teaching people to develop analytical skills to take proper decisions at the right time. This was of course supplemented by redesign of other work processes.