

Epc plant equipment maintenance process

[Science](#), [Physics](#)



Man-hours of Planned WOW Standby Man-hours ratio 0 No. Of Standby Man-hours / No. Of total Man-hours Mean work-order execution time (Days)
Maintenance cost and cost ratio 0 Total maintenance cost per month / Total equipment book value 0 Differentiated values for man-hours and spare-parts
0 Divided in separated categories of equipment (rotary, fixed, facilities, etc.)
Measured monthly Level 1 cross-functional map of the current process

We at EPIC have been able to produce and deliver high quality, high-value chemicals to our customers through modern process technologies and hallucinated equipment and facilities. However, The ever increasing competition in the market requires us to reduce our plant maintenance costs and improve maintenance productivity by reducing non-value-adding activities and idle times, optimizing our manpower and machinery resource allocation, reducing spare-parts inventories, and minimizing the equipment idle-time and maintenance/procurement delays. These objectives may not be achieved unless we review, assess, and improve our maintenance planning and execution processes.

To achieve an acceptable level of maintenance quality and productivity aimed at increasing production reliability and continuation, we have proposed to initiate a comprehensive analysis of maintenance processes, targeted at 50% reduction in maintenance costs and time, 30% reduction in spare parts inventory, and an average inter-overhaul period of at least 8 years. Implementing the above initiative will hopefully enable us to maintain our costleadership and remain at the top of the domestic chemicals market. Review/analysis of the current state and its problems/issues As cited in the section n symptoms/problems and the root cause analysis chart, The most
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basic symptoms of the maintenance process which are manifested in the internal customer's dissatisfaction are delayed execution and poor quality of maintenance work.

These are mainly attributed to unskilled maintenance workers, poor coordination and cooperation between production and maintenance workers, and long procurement procedures, which result in several losses: 0 Downtime from breakdown and changeover times 0 Speed losses (when equipment fails to operate at its optimum speed) 0 Idling and minor stoppages due to the abnormal operation of sensors, blockage of work on hates, etc. 0 Process defects due to scrap and quality defects to be repaired 0 Reduced yield in the period from machine start-up to stable production. But the ultimate cause of all these inefficiencies lies in the non-optimized function-oriented hierarchical organization within the maintenance and other company-wide departments. In fact, this last phenomenon is the cause of fragmented processes and unnecessary control and inspection, which in turn hinder employees' motivation and empowerment as well as cause very long cycles of spare-parts procurement. Initial improvements- Streamlining